

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

66 PORTLAND PLACE LONDON W1 • THREE SHILLINGS AND SIXPENCE



Stratford Festival Theatre, Stratford, Ontario: view from across the Avon. Architects: Rounthwaite and Fairfield

Photo: Max Fleet

14

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'U' values - the facts

It is often the practice to quote *calculated* 'U' values of walls construction as a basis for determining thermal efficiency.

Calculated 'U' values derived from small-scale laboratory tests on individual samples of dry materials, however, can be most misleading and have little or no value unless the relevant moisture content of the material is known.

In 1954, after discussions with the Building Research Station of the Department of Scientific and Industrial Research, London Brick Company Limited initiated a series of tests on the thermal transmittance of walls, using various building materials under conditions of actual exposure to weather.

The full results of all the tests have been published and read as a scientific paper at the 1958 Autumn Meeting of the British Ceramic Society. London Brick Company Limited have subsequently printed a 16-page summary entitled "'U' Values — The Facts".

The summary gives the full results of the 1,250,000 individual readings taken over the four years, describes the methods used and discusses the cost aspects involved in providing effective thermal insulation.

of importance to all in the building industry

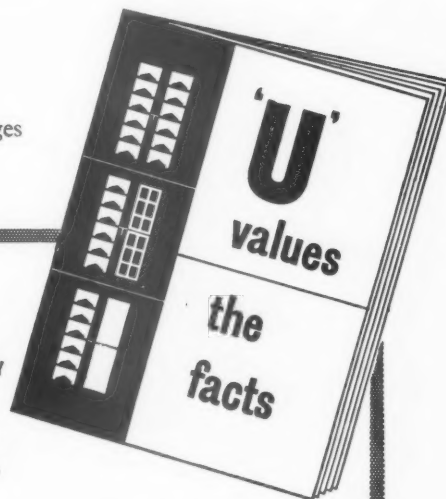
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- * That there is a considerable difference between the conductivity of the brickwork in the inner leaf and that for similar bricks in the outer leaf of a cavity wall due to difference in moisture content ?
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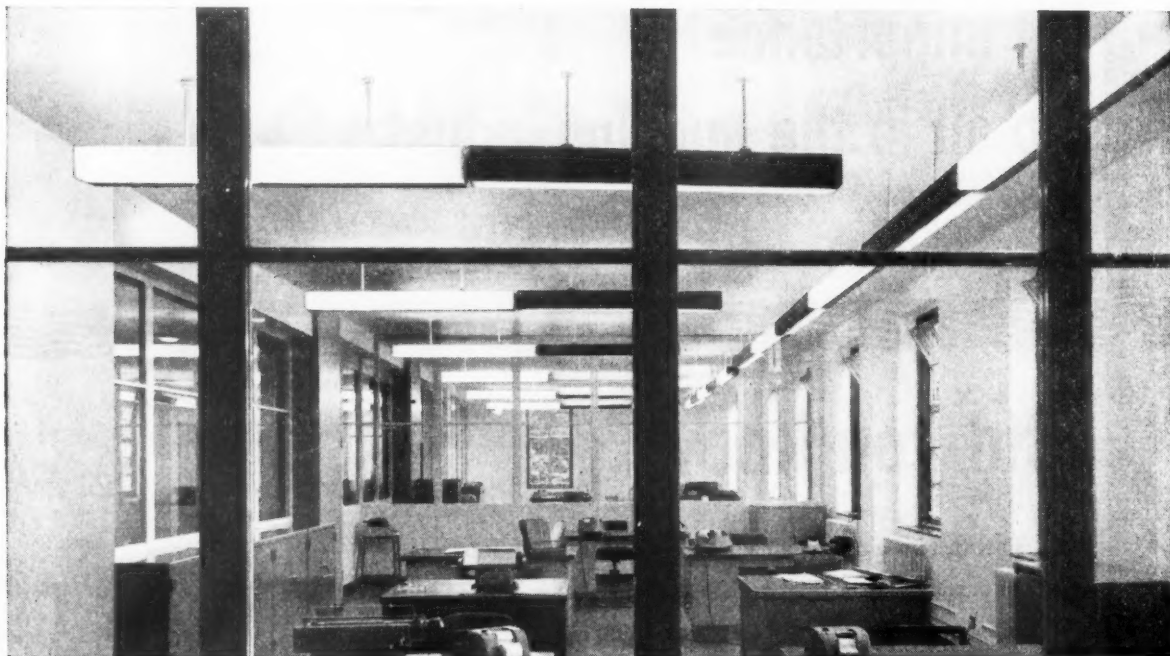
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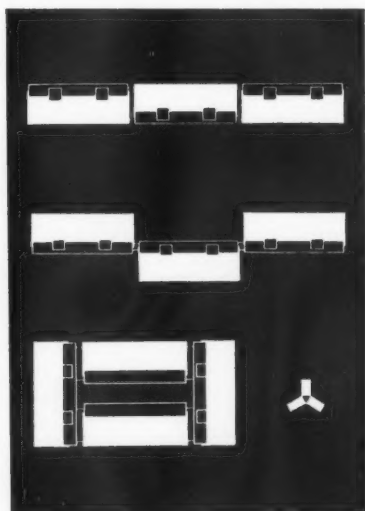


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Atlas Domino is a system based on the use of rectangular units, 'bricks' of fluorescent light. With these units it is possible to build up almost any desired pattern of light.

Domino units comprise a black metal chassis in semi-gloss finish with white opal 'Perspex' diffusers, available in 5ft., 4ft., and 2ft. lengths, housing one or two tubes. Domino units can be suspended horizontally, vertically or on edge; singly; or in groups, end to end, edge to edge, and back to back.

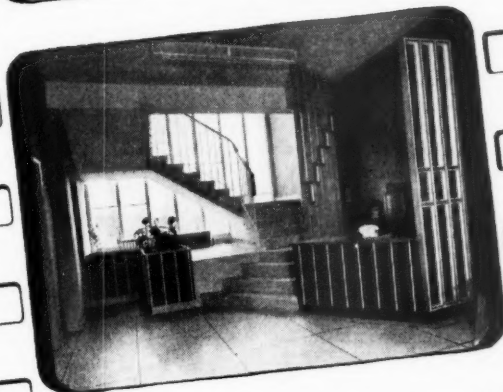
The illustration shows a simple decorative installation, economical to maintain; and the sketch, in plan, a few of the many possible patterns that can be formed.

Atlas Lighting engineers are available for consultation at any time, and will gladly call by appointment.



ATLAS LIGHTING LIMITED A subsidiary company of Thorn Electrical Industries Limited, 235 Shaftesbury Avenue London W.C.2.

IN A DEVELOPING INDUSTRY



To a progressive concern, quality matters a lot. Small wonder, then, that Gevaert Ltd. the leading photographic specialists, have made extensive use of International paints — Interlux Gloss Paint and Flat Finish — for their administrative building in Brentford. Successful schemes, such as this, using well-known International paints like Interlux, Interlight Emulsion Paint or Polierome wall finish, find their counterpart throughout the country. Frequently the painting scheme is planned in collaboration with International's technical representatives — please remember that their services are at your disposal too.

*Architects: Douglas & J. D. Wood
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monthly review by

WILLIAMS & WILLIAMS

'WALLSPAN' FOR NEW B.O.A.C. WING HANGAR

1 Both ends of this vast new maintenance hangar at London Airport are glazed by Williams & Williams—the 2-story central workshop block being emphasized by a panel of 'Wallspan' set in a projecting concrete frame. Aluminium windows are set in the 'Wallspan' grid and three types of opening lights—top-hung, projected, and vertical-pivoted are incorporated. The spandrel panels are Vitrosalab.

The basic design is an interesting solution to a recurrent problem in the design of aeroplane hangars whose height, after allowing for high-level services, is dictated solely by the tail-fin height of the various aircraft to be accommodated. Airliner design in recent years has tended towards increasing tail heights, and the hangar designer has been faced with a difficult economic problem since every foot of increased height is reflected in increased capital cost and higher heating, lighting and maintenance costs. Whatever height is decided upon may still prove inadequate for some new aircraft a few years hence. But on the other hand a reversal of the present trend—airliners designed on the Delta configuration for example—would result in hangar height becoming so much wasted space.

The new B.O.A.C. Wing Hangar, as the name implies, is designed to accommodate only the wings and fuselage of the aircraft—the sliding doors are shaped to close around the rear fuselage leaving the tail unit outside. Engines, undercarriage, flight deck, passenger cabin, wing fuel tanks and wing control surfaces—the usual objects of routine maintenance—are all under cover.

The reinforced concrete structure consists of a pair of hangar pens, each with a completely unobstructed 565 ft. wide opening and depth of 110 ft., arranged back-to-back but separated by a central two-floor workshop block. The hangar pen roofs are suspended by ties from this central block.

'ALOMEGA' WINDOWS FOR CORNISH COMFORT

2 This study flat is high up, midway between the coasts of Cornwall. The client wanted big windows for the

sake of the panoramic views across to St. Ives but had misgivings about draughts. The architects' solution to his problem was to install 'Alomega' double hung sashes—heads, sills, jambs, and meeting rails all designed with integral weather-stripping to keep draughts out, even in a blustery south-wester coming across thousands of miles of Atlantic! Other reasons for specifying 'Alomega'—**no maintenance**: no cords or counterweights or balances to go wrong; no painting because the windows are all-aluminium; **easily adapted to a 3 ft. building module**: the 2 ft. 8½ in. width was used—others from 1 ft. 2½ in. to 3 ft. 5½ in.; **ideal combination with picture window**—see illustration opposite.

Last (but not least in these Subtopian days), the sash window is considered in a special way to be the window for the West Country and 'Alomega' happily combines the technical resources of today with the graceful design of the eighteenth century.

A further advantage which was not applicable in this particular instance, but of considerable value in congested urban sites, is the fact that with 'Alomega' the building can come right up to the building line.

NEW STANDARD WINDOWS CUT SITE COSTS—NEED ONLY ONE COAT OF PAINT

3 Williams & Williams standard domestic windows to BS 990 in both 1 ft. 8 in. and 2 ft. ('Z' range) modules are now available electro-galvanized, primed and painted. The windows are processed in an entirely automatic plant which is believed to be the largest of its kind in the world.

The assembled frames are loaded on to a conveyor—chemically cleaned, phosphated and electro-galvanized. Still on the same mechanical conveyor, the windows are dipped in a paint bath and stoved for 25 minutes at 310°F. They then receive a second sandy-beige coat and are finally stoved a further 25 minutes—again at 310°F. The paint technology of the operation has been worked out in collaboration with ICI and the paint used is their beige No. B215/166/2.

This process offers four major advantages:

1. Since the human element is eliminated, a much more even distribution of paint is assured.
2. All surfaces of the frames are painted, including those which will be in contact with the masonry and which in the ordinary course of events could not be painted.
3. The fact that both primer and second coat are stoved lends greater durability to the paint giving together with the galvanizing coat an efficient triple protection to the steel surface.
4. The second stoved coat can be regarded as an undercoat. Because of its light shade only one finishing coat need be applied on site.

WILLIAMS & WILLIAMS

RELIANCE WORKS • CHESTER



Member of the Metal Window Association

1 B.O.A.C. WING HANGAR, LONDON AIRPORT
Engineers for reinforced concrete structure: Sir Owen Williams & Partners.
New Works Manager, B.O.A.C.: L. B. Haley, M.Eng., A.M.I.C.E., A.M.I.H.V.E.
General Contractors: W. & C. French Limited.

A General view—note the tails of Britannia aircraft protruding from the hangar pen on the extreme right of the photograph.

B Detail of the 'Wallspan' on the central workshop block—3 types of opening lights can be seen in the aluminium windows. Note the permanent railway along the cornice for the cleaners' cradle.

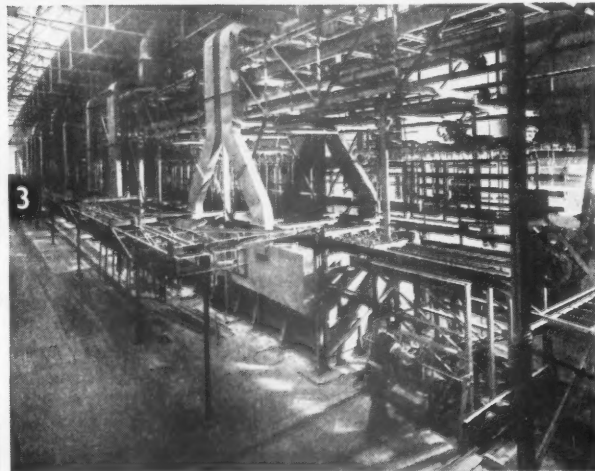
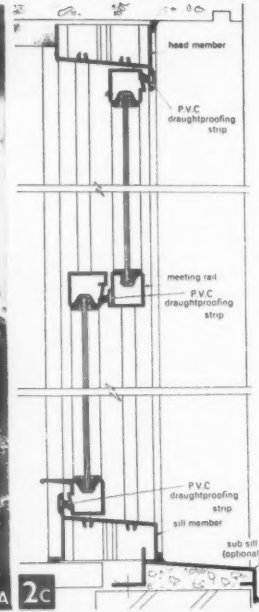
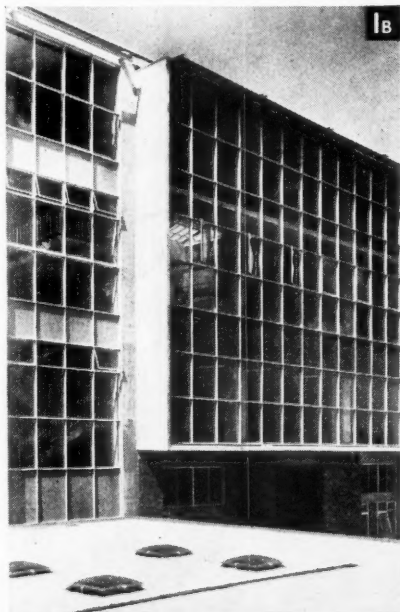
2 'LITTLE TREFEWAHA', PRAZE, CORNWALL
Architects: Taylor & Crowther, Chartered Architects.

A Exterior.

B Interior of the study showing how the 'Alomega' sash forms part of the glazed corner.

C Draughtproofing plastic extrusions at head, meeting rail and sill of 'Alomega' double-hung window.

3 Part of the automatic conveyor system on which Williams & Williams new standard paint-finished metal windows are processed.





CASE
HISTORIES



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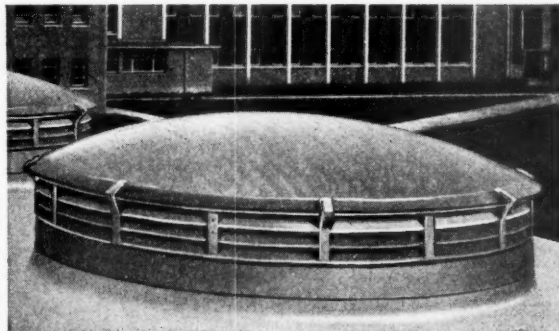
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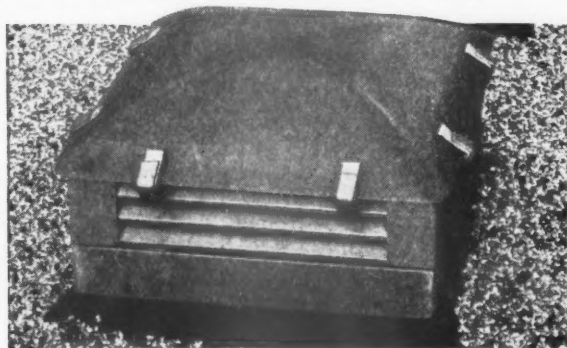
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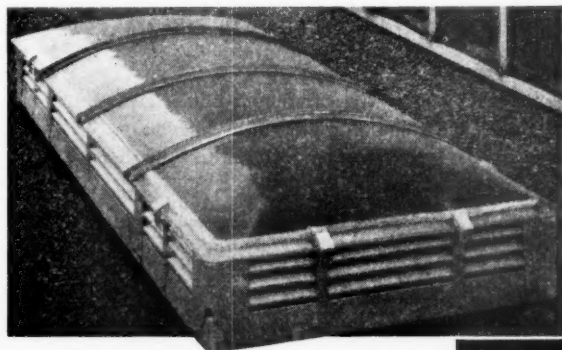
Specifically designed to give both low overall height and unobtrusive appearance, the Greenwood-Airvac patented range of Dome and Continuous Rooflight Ventilators provides fully weathered controllable or permanent ventilation with maximum daylight.



Circular Dome ventilators are supplied from 18" diameter to 72" diameter. This is one of a number of units installed at the Gormans-town Franciscan College, Co. Meath. (Architect: John C. Thompson, B. Arch., A.R.I.B.A.)



Rectangular dome ventilators are available from 30" x 30" to 48" x 72". Large numbers have been specified by the Chief Architect at Crawley New Town. (Chief Architect: H. S. Howgrave-Graham, A.R.I.B.A., A.M.T.P.I.)



This Half Dome End Continuous Rooflight Ventilator is one of twenty 8' 0" x 4' 0" units at S.E.G.B. Belvedere Generating Station, Kent. Available in extended lengths from 8 ft. with nominal widths up to 6 ft. (Architects: Farmer & Dork F.F.R.I.B.A.)



Gable End Continuous Rooflight Ventilators 16 ft. long x 5 ft. 2 ins. wide were installed on the Textile Paper Tube Factory, Romilly, Cheshire. Supplied in extended lengths from 4 ft. with nominal widths up to 7 ft. (Architects: Arthur Swift & Partners.)

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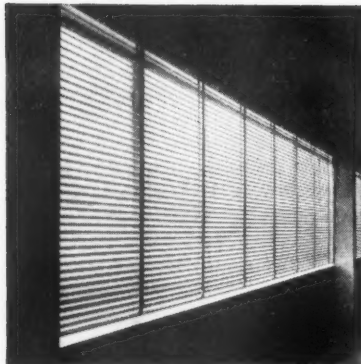
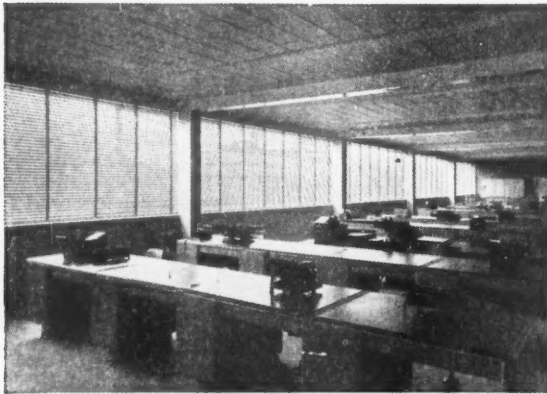
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is thus greater in diameter than... the tube, providing adequate... steel reinforcement and at... ensuring the maximum skin... its rough corrugated sur... il which has already been... driving process and is... ain by the greater girth

nation of the pile shaft a... hammer cable serves (in the... when the tube was driven) to... the head of concrete necessary to... the entry of water or any other... matter. Should water accidentally... he tube the heavy hammer jams in the... concrete and the pile has to be re-driven... s offers the practical assurance that a... crete of low water-cement ratio is always... to the pile. In fact this ratio is lower... system of in-situ piling.

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the shaft can be stopped at... below ground level, always... provided the shaft has attained the adequate... minimum length for stability. Except in... special circumstances no in-situ piles can... be formed above the ground level from... which they are installed.

is normal practice to finish off the... foot above the required... other greater

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LATE NEWS REBUILDING AT NOTTING HILL GATE

Work has commenced on the redevelopment of this important London area. The contract for piling the foundations of Scheme 'A' has been placed with the Franki Compressed Pile Company Limited of 39, Victoria Street, London, S.W.1. Just over 1,000 piles will be installed to depths up to 45 feet, each pile carrying approximately 60 tons, and this piling contract is scheduled to take less than four months. The Franki Company offers a free 95-page book on piling to Architects and Engineers.

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After the recording which may have occurred the load is gradually increased. Piles are normally also be tested in

When the pile is in final reading is taken this and the reading is recorded as the Piles are normally also be tested in

THE

The efficiency

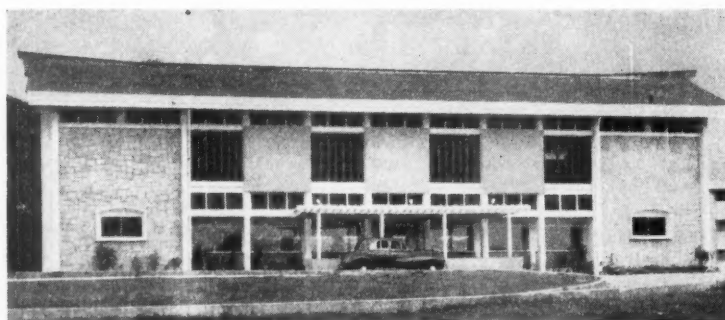
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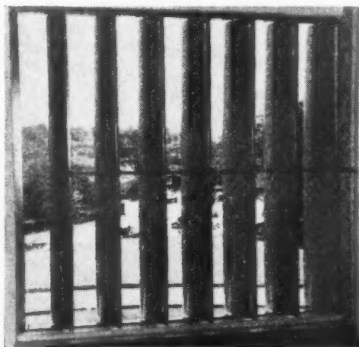
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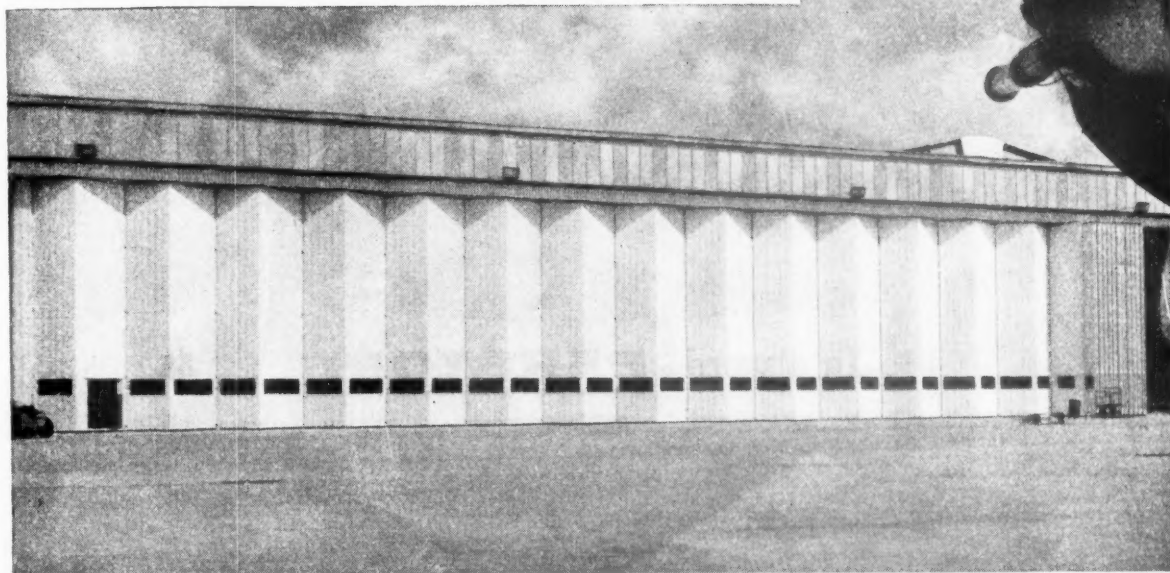
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FOR TRANSAIR AT GATWICK



One of the two Transair Hangar Bays at Gatwick Airport. Architects: Clive Pascall and Peter Watson, F/A.R.I.B.A.

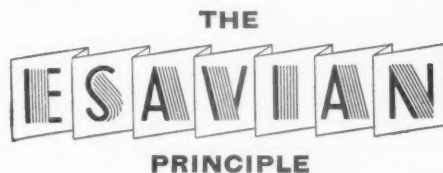
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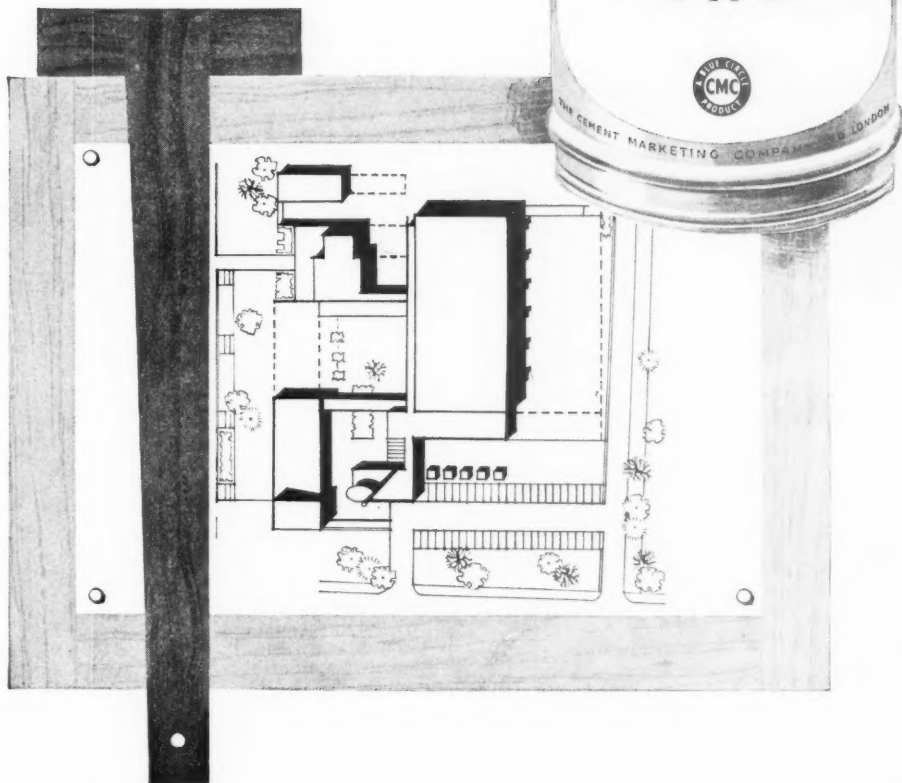
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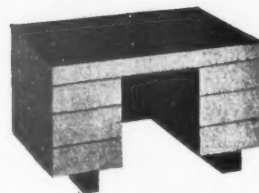
Carter Tiles Limited, Poole, Dorset. Telephone: Poole 125.
Carter & Co. London Ltd., 29 Albert Embankment, S.E.11. Telephone: Reliance 1471.
Manchester Office: 27 Brazennose Street, Manchester 2. Telephone: Blackfriars 2098.
Art Pavements and Decorations Ltd., St. Paul's Crescent, Camden Town, N.W.1. Telephone: Gulliver 2226.
Commercial Marble & Tiles Ltd., Newcastle-upon-Tyne. Telephone: Newcastle 811373.
Carter Tiling Edinburgh, 13 Steads Place, Edinburgh 6. Telephone: Leith 39188.
Associated Company: The Marbolith Flooring Co. Ltd.





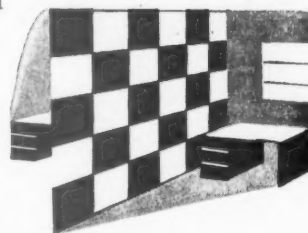
Summers

John Summers & Sons Ltd. are one of the foremost manufacturers of sheet steel in this country and have taken a leading part in the development of coatings for sheets. The latest and most revolutionary of the sheet steels pioneered by this company is Stelvetite.



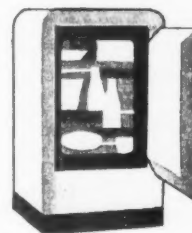
sheet steel

Stelvetite is a specially formulated plastic bonded to strip mill cold reduced sheet—the first time plastic has been bonded to steel in continuous sheet. It can be bent, formed, seamed, deep drawn, joined and welded and its coating remains flawlessly intact. While having good insulating qualities, it resists acids, alkalis, detergents and greases, weather and abrasion.



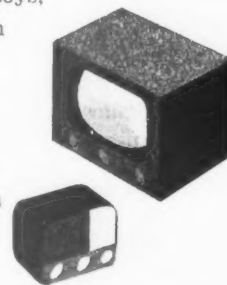
many forms

While having a pleasant warm touch, Stelvetite cleans easily, is available in a wide range of colours and finishes, costs less than stainless steel. It requires no surface finishing treatment. Think what this means in cost and in time saving . . . in the added finished appearance of such items as wall panelling, furniture, transport vehicles' interior trim and panelling, drums and containers, electrical equipment, radio and television cabinets, toys, partitioning and doors, kitchen equipment . . . and in innumerable other applications . . .



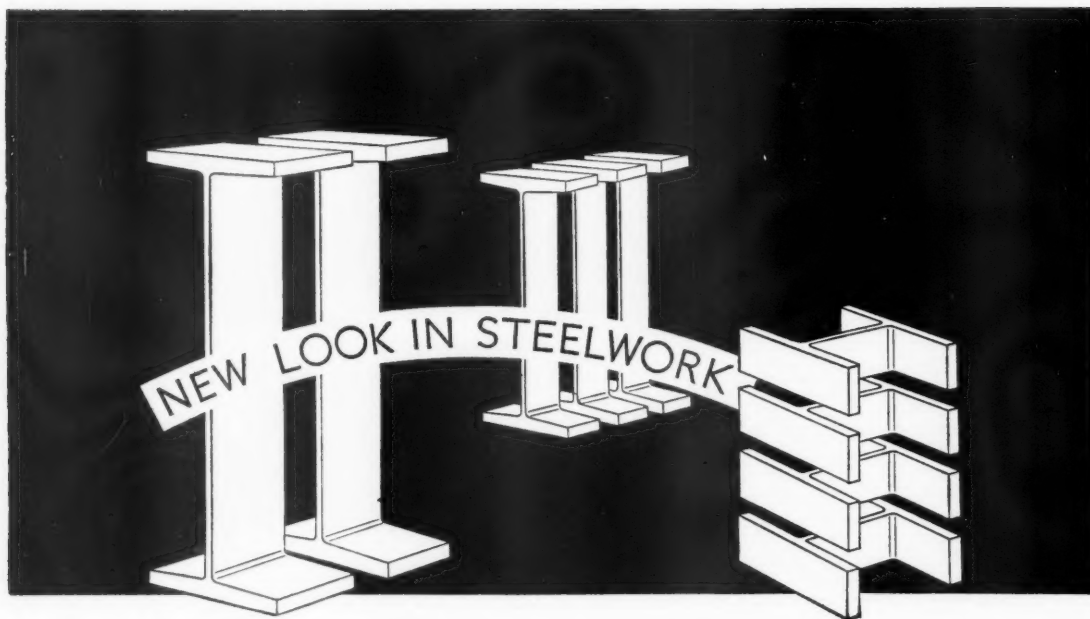
STELVETITE

. . . is one of a family which also includes Galvatite, Nitec and Zintec, all made by John Summers & Sons Ltd. 52,000 miles of Summers' Sheet Steel are used every year.



John Summers and Sons Ltd

SHOTTON · CHESTER



'UNIVERSAL' SIMPLIFICATION

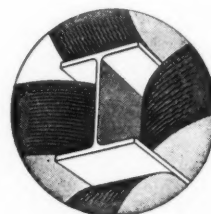
Our new Universal Beam mill is now at work rolling beam sections in a wide range, from 36 in. by 16½ in. down to 8 in. by 5¼ in. In planning this new range, the needs of the designer have been studied closely, and each section is available in different weights to suit the loads to be carried.

Designers are already reaping the benefit of simplification—for many of the beams are larger than any hitherto rolled in Europe. They can be used, direct from the mill, for bridge spans which have previously needed expensive fabrication.

We also roll 'H' sections for columns (ranging from 6 in. by 6 in. up to 14 in. by 16 in.) in related 'families' of different weights, so that the increased column-loading at the lower storeys of tall buildings may be met by simple sections without riveted-on flange plates.

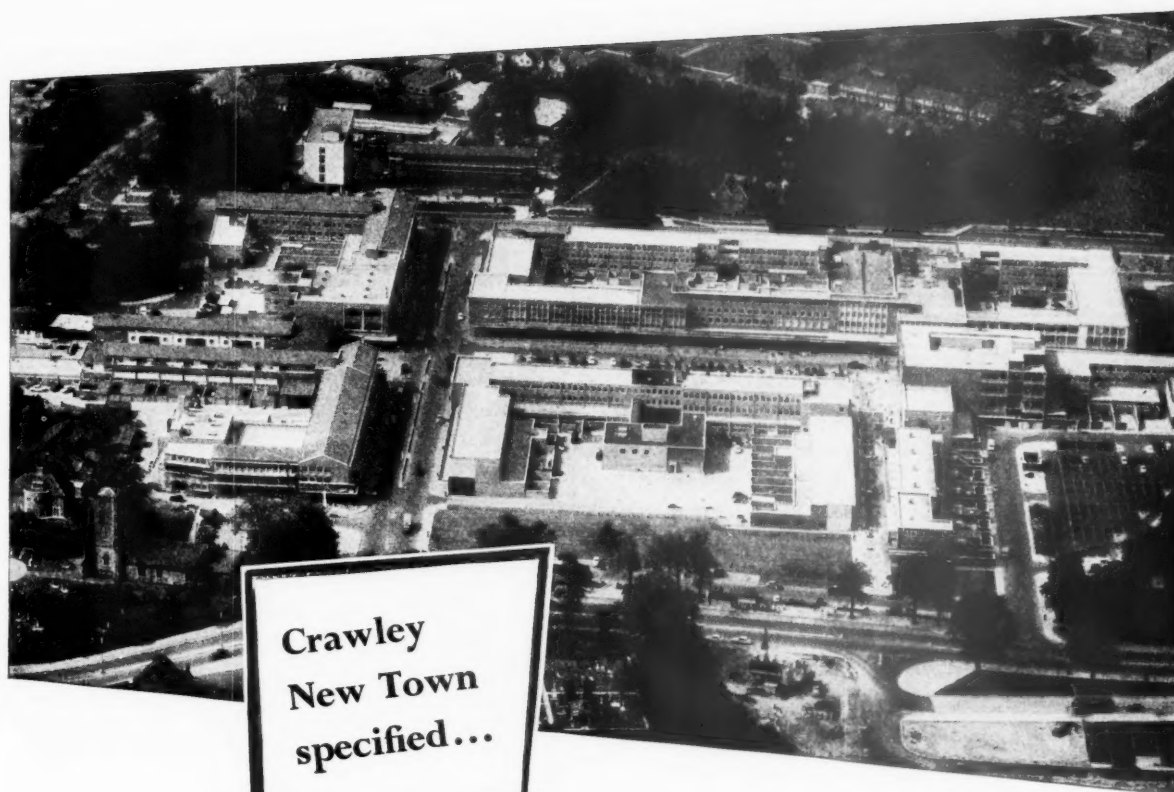
The range of British Standard beams, channels and angles continues to be available.

Diagram showing the arrangement of the rolls, which are adjustable to control the flange and web thickness. Other rolls, not shown, size the edges.



EARLY DELIVERY OF THE FULL RANGE OF SECTIONS

DORMAN LONG



Crawley
New Town
specified...

'NAMASTIC'

The Crawley Development Corporation specified 'NAMASTIC' for the Roofing of the new Shopping Centres; stages 2a & 2b at Crawley New Town. This is yet another scheme where 'NAMASTIC' was specified for its outstanding quality and great economy.

The Association has a membership made up of the following:—
ASSOCIATED ASPHALT COMPANY LTD.
BOLTON & HAYES LTD.
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WILLIAM BRIGGS & SONS LTD.
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Specify...

'NAMASTIC'

THE STANDARD ASPHALT FOR BUILDING

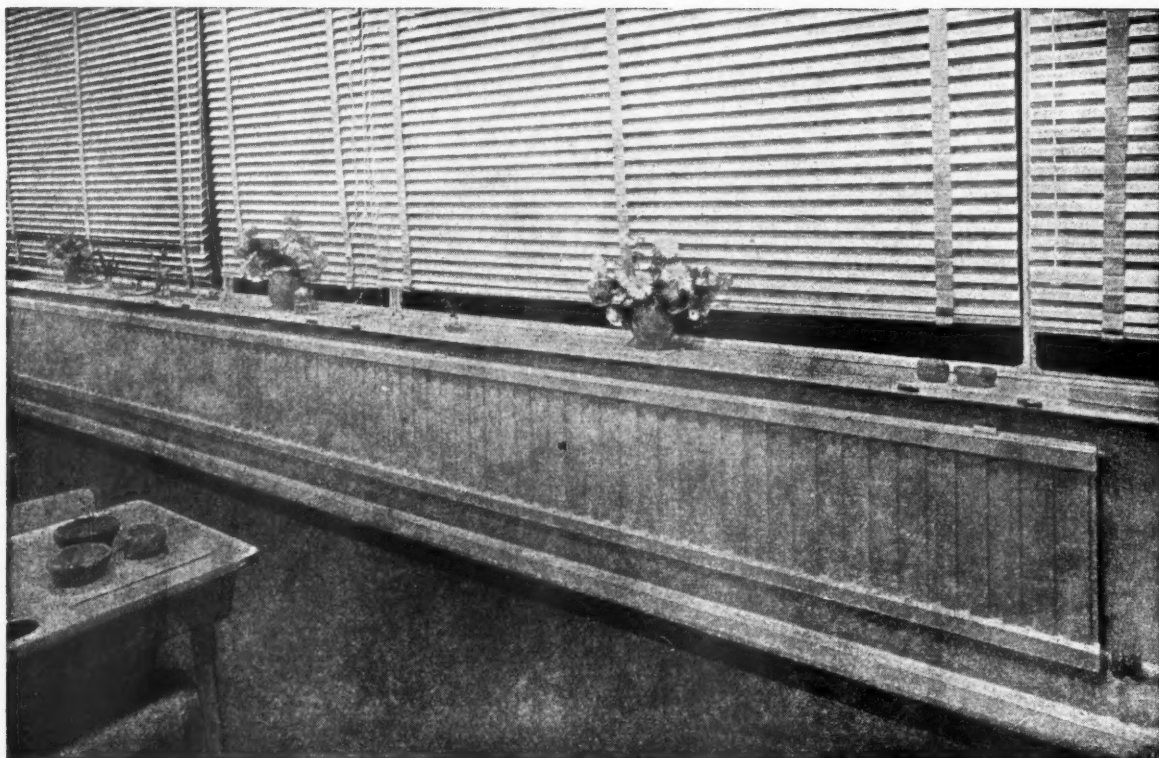


FALDO ASPHALT CO. LTD.
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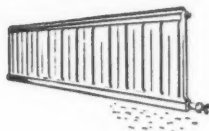
For full information about N.A.M.A. and free technical advice on asphalt for Building, apply to the Secretary:

NATIONAL ASSOCIATION OF MASTER ASPHALTERS, 9 CLARGES STREET LONDON W1
TELEPHONE: GROSVENOR 5333 ESTABLISHED 1933

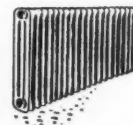
STELRADS...



... so much more than just a method of heating



To ensure an efficient central heating system, you must have:—
a wide range of radiators to choose from, adequate literature to plan with, best quality steel and oxy-acetylene welding for strength, rigorous testing and inspection to be sure, friendly service and prompt delivery to speed the contract, and above all, a consistent price. Is this why so many architects say "You know where you are with Stelrads"?



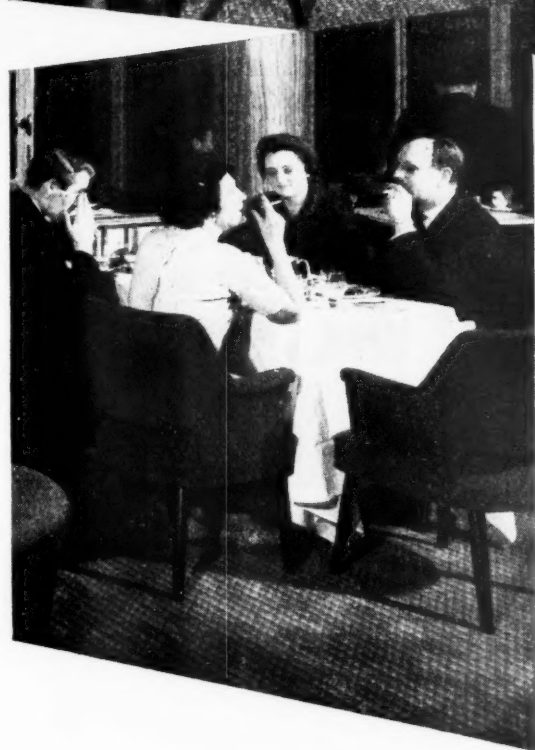
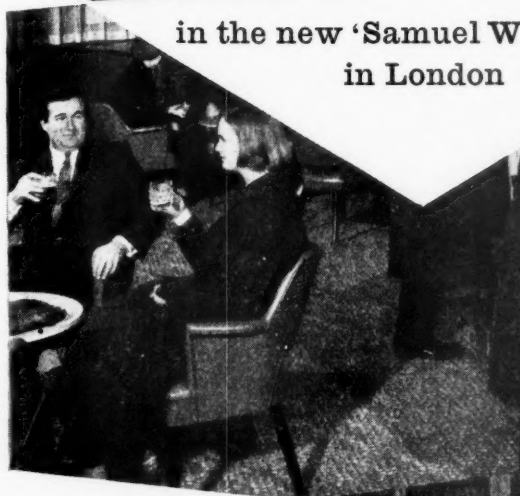
**STEEL RADIATORS
LIMITED**

BRIDGE ROAD SOUTHALL MIDDLESEX

Telephone Southall 2603

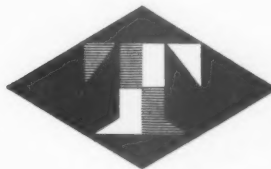
TOMKINSONS CARPETING

in the new 'Samuel Whitbread'
in London



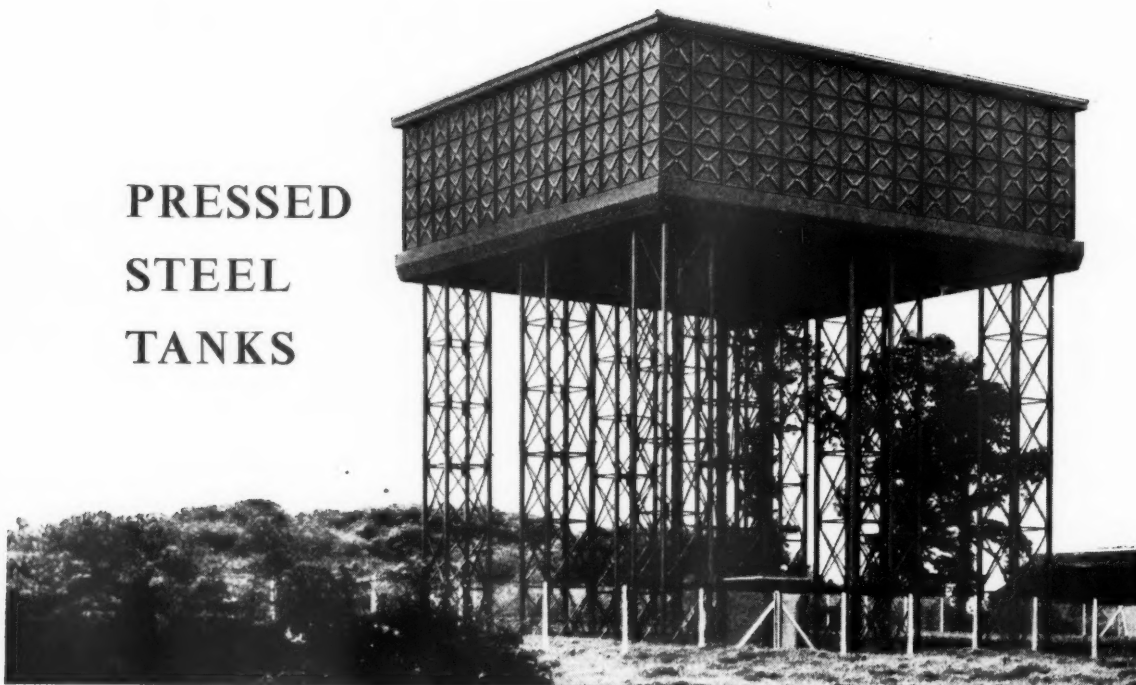
In the Zodiac Bar,
Tomkinsons 'Tesserae' in grey.

In the Dining Room,
Tomkinsons 'Linked Design'
in red and black and green and black.

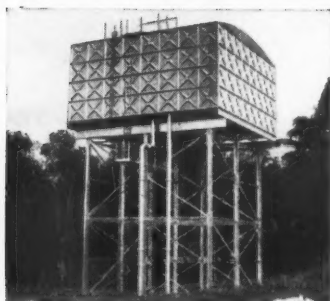


TOMKINSONS LIMITED
P.O. Box No. 11
KIDDERMINSTER, WORCS.

PRESSED STEEL TANKS



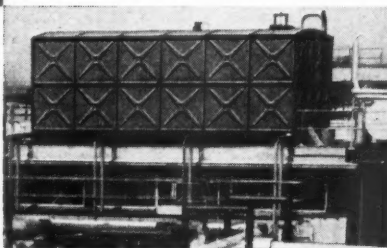
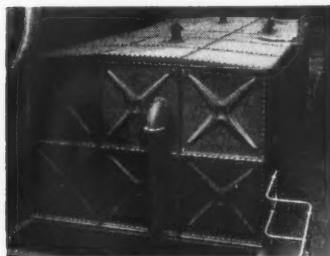
*Storage for 340,000 gallons at 52 ft., Southam, Warwickshire.
Consulting Engineers W. Herbert Bateman & Partners.*



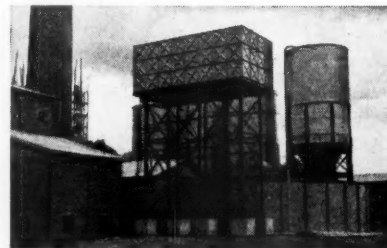
*Storage for nearly 100,000 gallons
supplied for the Public Works Department,
Kuala Lumpur, Malaya.*

Unit constructed Braithwaite Pressed Steel Tanks with or without steel supporting structures can be supplied in an unlimited range of capacities. The technical advisory service of Braithwaite & Co. Structural Limited is available to assist those concerned with the installation of tanks for both conventional and unusual storage needs or for any other requirement for which the unit method of construction is suitable.

*Supported on steel grillages,
one of many covered tanks erected at
a power station near London.
Consulting Engineers Merz & McLellan.*



*Storage tank for softened water at the
Isle of Grain Oil Refinery.
(Photograph courtesy Tothill Press Ltd.)*



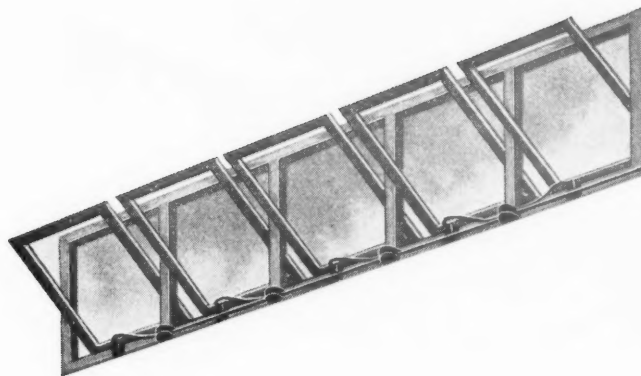
*Industrial development, Malaya.
Water storage tank at the new works of
Malayan Cement Ltd.*

BRAITHWAITE & CO. ENGINEERS LIMITED

BRIDGE AND CONSTRUCTIONAL ENGINEERS



LONDON OFFICE: DORLAND HOUSE, REGENT STREET, LONDON SW1 TEL: WHITEHALL 3993



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you were down here



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P.262



KEEP THEM IN THE CLEAR

*A Series of informative articles on smokeless coke and gas appliances
is appearing, giving technical data and information on installation.*

The following, together with binder, are now available

from your Area Gas Board or from the address below :

Sections 1, 2, 3, 4,

THE GAS COUNCIL, (Department A), 1, Grosvenor Place, London, S.W.1.

Main Office Block at
Head Wrightson & Co. Ltd.
Teesdale Iron Works, Thornaby-on-Tees.

Architect:
Justin H. Alleyn B. Arch., F.R.I.B.A.

Contractors:
John Laing and Son Limited.
Gypunit Partitions erected by
Gyproc Products Ltd. Contracts Department
under the direction of the
Works Engineer of Head Wrightson & Co. Ltd.

GYPUNIT PARTITIONS
in the Purchasing Department.



GYPROC AT THORNABY

... are undertaking the extensive
work of partitioning both the new
and the existing premises of
Head Wrightson & Co. Ltd ...



GYPSTEEL CEILING and
GYPUNIT PARTITIONS in
a corridor.

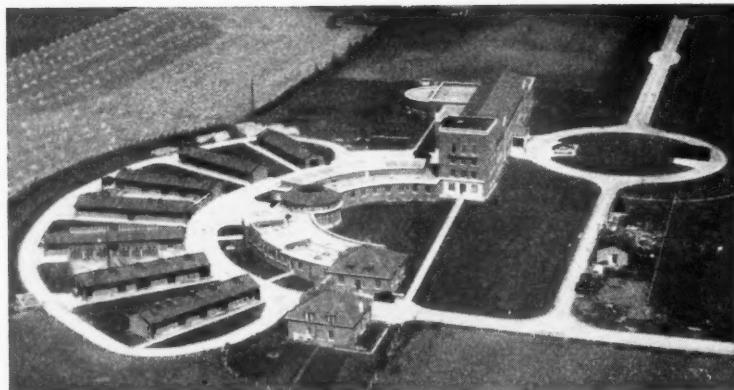
USING GYPUNIT PARTITIONS

GYPUNIT Partitions are easily and speedily erected, light in weight, demountable and adaptable to individual requirements. The surface spread of flame classification is Class 1 (B.S.476). For extra quietness there is a Double-leaf GYPUNIT Partition giving high sound reduction. GYPUNIT Partitions are described fully in "Architects' Journal" Information Sheet R21G2. Copies available on request.

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Glasgow Office: Gyproc Wharf, Shieldhall, Glasgow, S.W.1. *Govan 274113*
Midland Office: 11 Musters Road, West Bridgford, Nottingham. *Nottingham 82101*
London Office: Bath House, 82 Piccadilly, London, W.1. *Grosvenor 4617/9*

s/gus



CAMBRIDGE SCHOOL OF VETERINARY MEDICINE

Architect: Ian Forbes, A.A.Dipl., F.R.I.B.A. (Forbes & Tate, London)

INVISIBLE PANEL WARMING

* Low temperature hot water is circulated through pipe coils embedded in the ceilings, floors or walls which emit gentle radiant warmth and provide comfortable conditions at a comparatively low air temperature. The absence of rapid convection currents results in greater cleanliness, and the walls are not obstructed by pipes and radiators. It is particularly suitable for hospitals, laboratories and other buildings where abnormal ventilation is necessary.

* *Extract from Publication No. 348, copies of which will gladly be sent gratis, on application to*

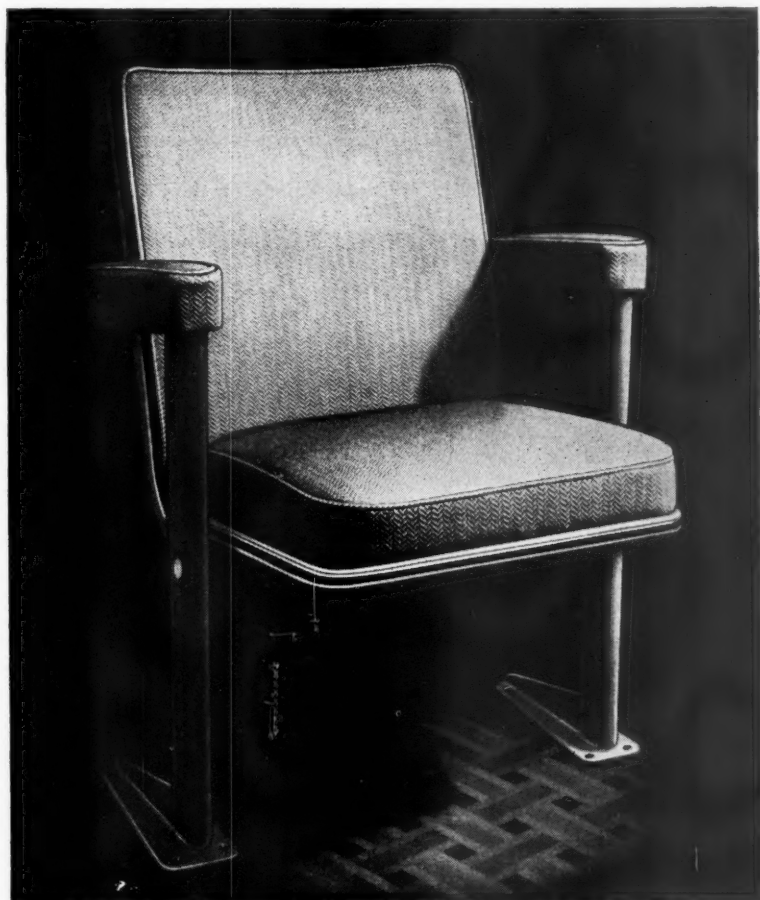
HOPE'S HEATING & ENGINEERING LTD

*Smethwick, Birmingham & 16 Berners Street, London, W.1
Branch Offices at Leeds, Cardiff & Hull*

Auditorium seating

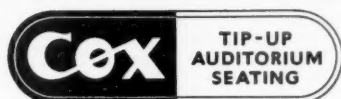
Both in this country and abroad, the reputation gained by Cox for tip-up seating is exceptionally high. For example, they were chosen for the installation of the Royal Festival Hall and of the Free Trade Hall, Manchester. In Venezuela they installed the seating for the great conference hall of the Instituto de la Ciudad Universitaria at Caracas.

Cox are concerned not only with large installations: here are shown models suitable for various sizes of hall.



G1312

Full technical information and price details sent on request

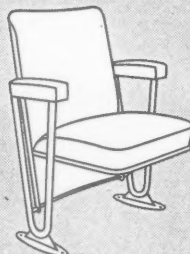


COX & CO. (WATFORD) LTD · WATFORD BY-PASS · WATFORD · HERTS · Watford 28541

G1311



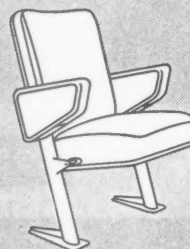
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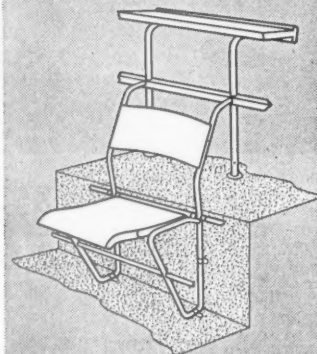
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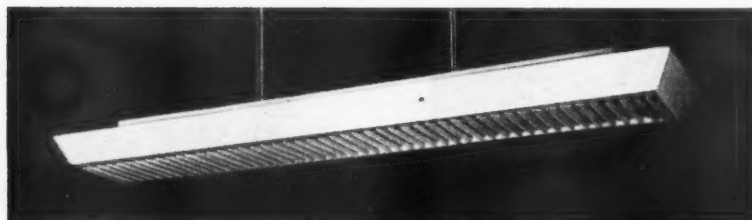
RFH1



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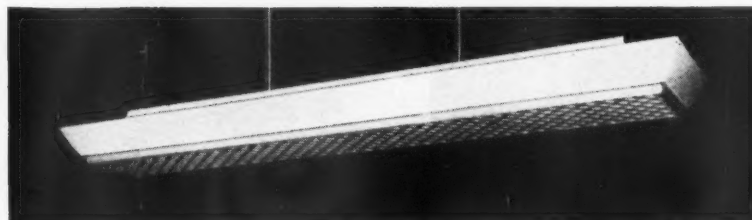


3 of the **Thames** range of Fluorescent Fittings by **Falks**



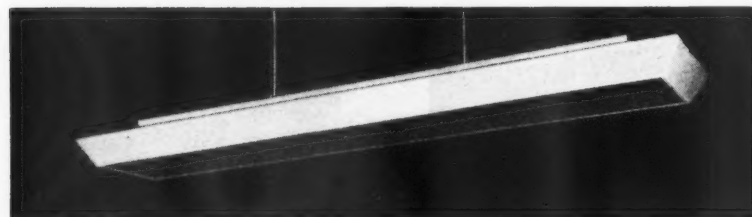
FLEET

Gear channel, body and louvre of sheet steel, stove enamelled off-white. The louvre is specially designed to show only the transverse members and has "Perspex" shields at each end to conceal the lamp holders



LODDEN

Gear channel and body of sheet steel, stove enamelled off-white. The louvre is of polystyrene.



EMBER

Gear channel and body of sheet steel, stove enamelled off-white. The lower panel is of $\frac{1}{4}$ " reeded clear "Perspex".

Lighting Engineers and Manufacturers of lighting fittings for all industrial, commercial and decorative purposes

The Thames range of Decorative fittings for fluorescent lamps has been designed to provide a range of 18 fittings from a small number of basic parts, comprising three simple designs with six lamping possibilities in each; 2, 3 or 4 lamps in 5ft 80w or 4ft 40w sizes. It will provide a fitting to suit the requirements of many interiors from the point of view of both appearance and luminous output.

Designed by R.F. Stewart, L.S.I.A. of Falks

FALKS
FALK, STADELMANN & CO. LTD

91 FARRINGDON ROAD, LONDON, E.C.1

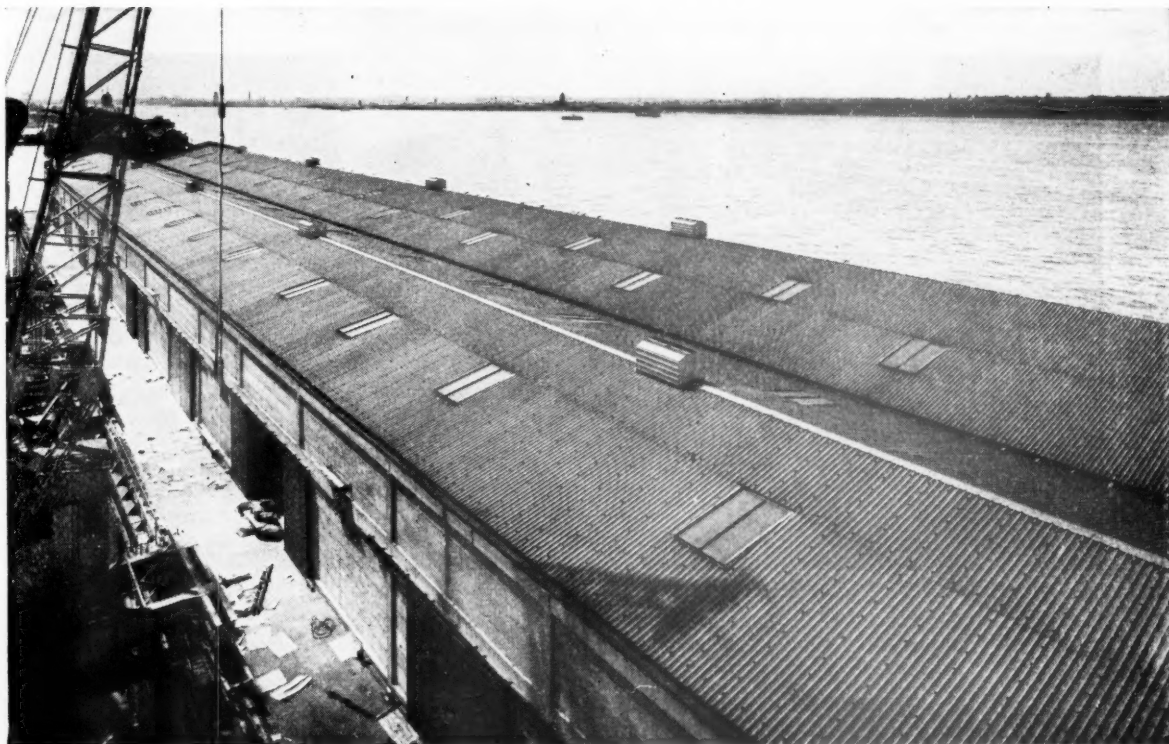
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SHOWROOMS: 20/22 Mount Street, Park Lane W.1 Telephone: MAYfair 5671/2

AP67

BRITISH ALUMINIUM

RIGIDAL ON MERSEYSIDE



For cladding harbour buildings, Rigidal provides a durable covering, resistant to attack by salt air, and costing much the same as materials of comparable life.

Freeman, Morrison Ltd used some 12 tons (500 squares) of Rigidal Industrial Trough 6T to cover this warehousing at Liverpool. Ventilators, glazing units, flashings and fasteners are also aluminium. In the same area Freeman, Morrison have covered several other large warehouses.

The BRITISH ALUMINIUM Co Ltd

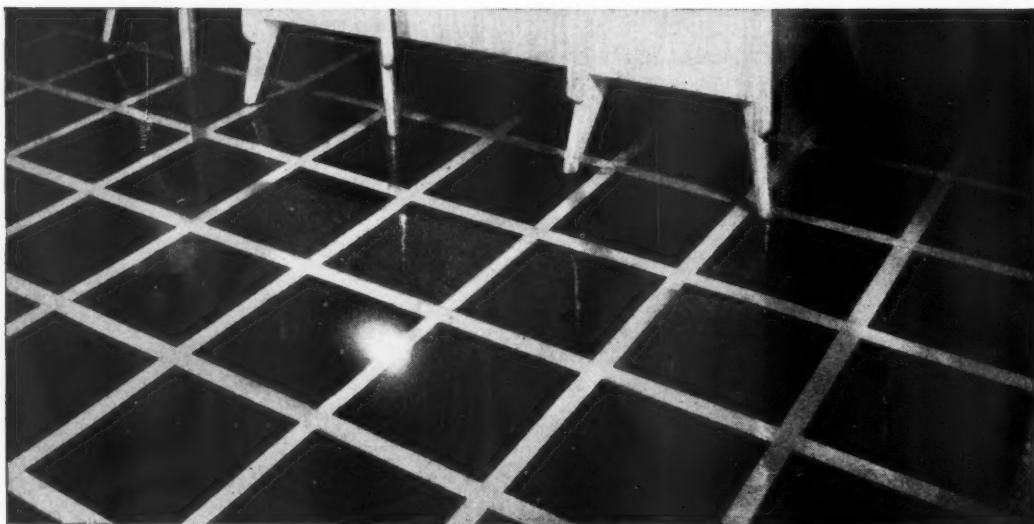


NORFOLK HOUSE ST JAMES'S SQUARE LONDON SW1

AP 269

GLAMOROCK TAKES THE FLOOR

with a magic carpet of natural stone



Glamorock Glaze used on an office floor with dramatic effect.

Glamorock Limited announce with pride two truly revolutionary surfacing materials of *natural stone*, for floors and also walls—Glamorock Glaze and Glamorock Granite. Both are *outstandingly economical*.

GLAMOROCK Glaze

possesses all the decorative and wear-resistant advantages of polished granite or Terrazzo, plus a far more attractive range of *natural stone* colours. Its cost works out at between 25/- and 45/- per square yard. Glamorock Glaze is the ideal material for floors and walls of private dwellings.

GLAMOROCK Granite

was evolved to give an exceptional degree of wear-resistance under the most severe conditions, while retaining the beauty, colour and design possibilities of Glamorock Glaze. Glamorock Granite makes a perfect floor surfacing for factories, schools, hospitals, public buildings and similar places. It is completely slip-proof and even after a normal floor polish has been applied, can be thoroughly cleaned simply by water. Neither Glamorock Glaze nor Glamorock Granite will ever fade or craze or crack. And they are both available in a superb range of 22 fade-free colours of the natural rock without any added pigments whatsoever, also an infinite number of delightful blends. Both materials (which are supplied ready-mixed) can easily be applied on practically any surface—timber, stone, cement etc.—provided it is free of oil and grease.

Important note to Flooring Contractors

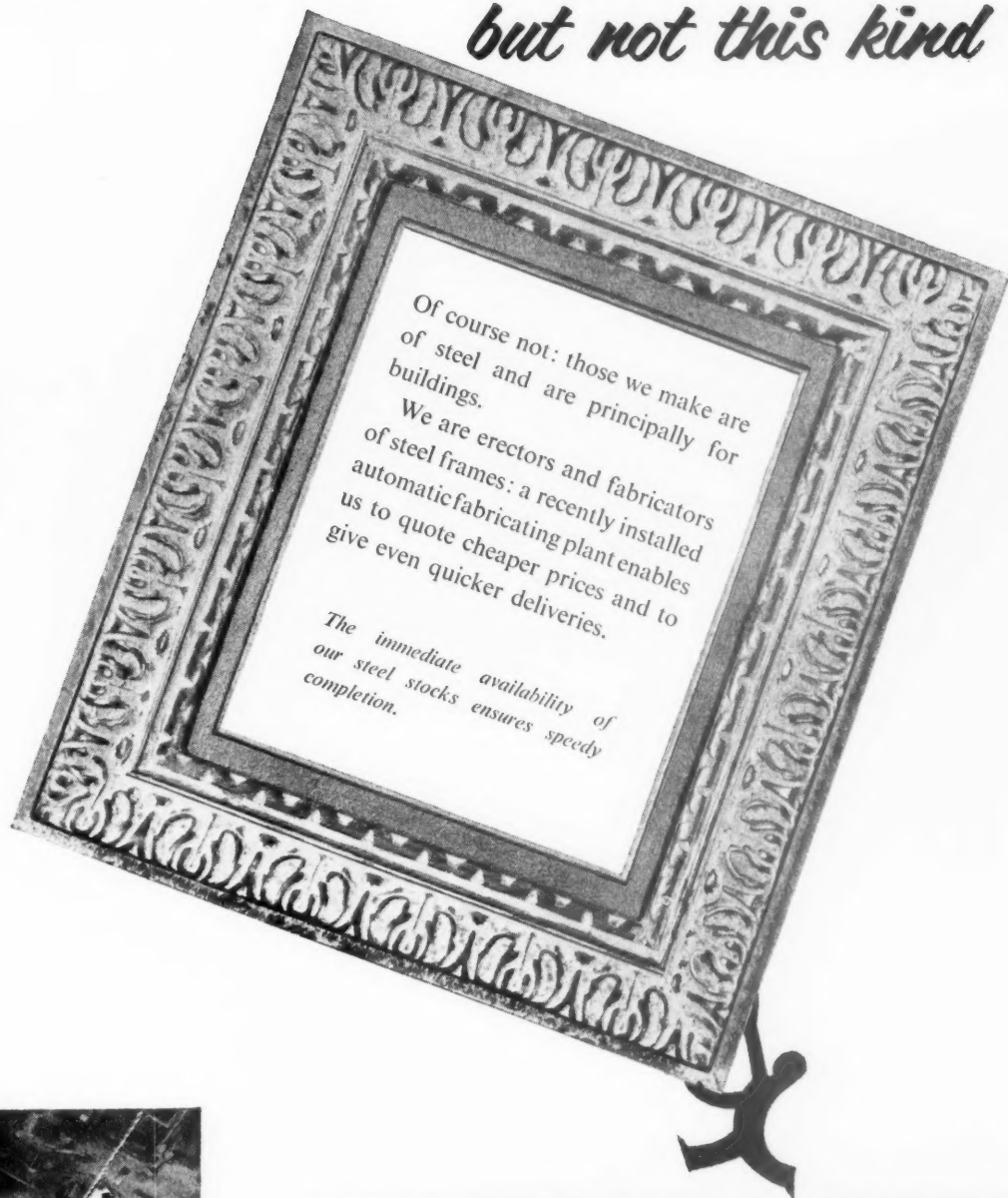
In view of the revolutionary nature of these products and the impact they will have on the Flooring Industry, you are invited to make full use of the Demonstration Services offered by:—

GLAMOROCK LIMITED, Monza Street, Wapping Wall, London, E1. Royal 6785/6 or

Montague L. Meyer Ltd. (Branches in principal cities), 14, Buckingham St., London, WC2

Surface Protection Limited, 28, South Street, London, W1

WE MAKE FRAMES....
but not this kind



Of course not: those we make are of steel and are principally for buildings.

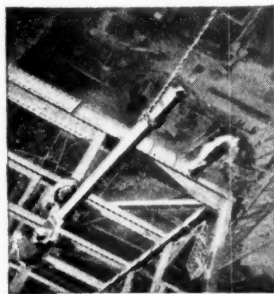
We are erectors and fabricators of steel frames: a recently installed automatic fabricating plant enables us to quote cheaper prices and to give even quicker deliveries.

The immediate availability of our steel stocks ensures speedy completion.

Banister, Walton build in steel

MCN3360

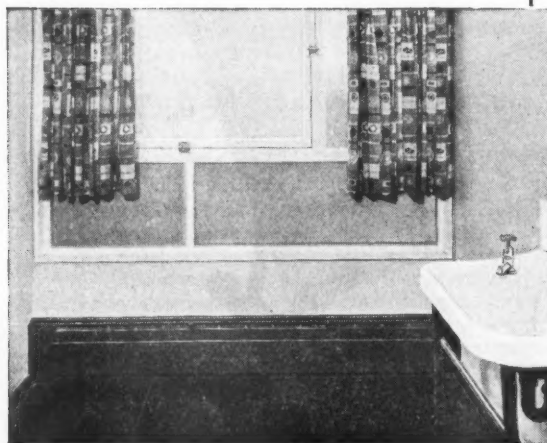
BANISTER, WALTON & CO LTD • Structural Steel Engineers and Stockholders • MANCHESTER • LONDON • BIRMINGHAM



Crane Skirting Heating has been installed throughout blocks A, B, C and D of the Men's Guildhouse, Coventry. Photograph shows blocks B and C.



Once again, skirting heating by Crane



The Men's Guildhouse, Manor House Estate, Coventry, is designed to accommodate workers who come from far afield. Modern not only in appearance but in construction, it is a remarkable example of the successful housing of four hundred men under pleasant conditions within a prescribed area. No less modern is the heating system. Crane Skirting Heating, 9 inch Type RC (Radiant-Convactor), has been installed throughout, providing an even warmth everywhere, with no cold spots and with a great saving of space.

There is also Type R (Radiant) which, in addition to the 6-inch size, has lately been made available in the 9-inch size for situations requiring additional heating surface. The panels are in 2-foot and 1-foot lengths and are made in cast iron for resistance to damage. Skirting heating is the perfect modern method of space heating.

City Architect and Planning Officer:
A. Ling, B.A., F.R.I.B.A.

Engineering Services under the supervision of the City Engineer and Surveyor:
Granville Berry, M.Inst.C.E., M.Inst.Mun.E.

Heating Engineers:
J. C. Toogood, Ltd., Birmingham.

CRANE SKIRTING HEATING, BOILERS, RADIATORS, VALVES & FITTINGS

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Branches: Birmingham, Brentford, Bristol, Glasgow, London, Manchester

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LONDON STOCKS



14 Queen Victoria Street, E.C.4
City 4333



Metropolitan Police Flats, Maida Vale
Architect: J. Innes Elliott, B.Arch., A.R.I.B.A.

THE BRICK FOR EVERY PURPOSE

Grade	Description	Uses
1. Yellow Facings	Uniform deep yellow colour, regular shape	Facings, when a uniform colour is required, dressings, arches, etc.
2. First Hard Stocks	Varying colour, hard, good shape	Facings
3. Second Hard Stocks	Hard, varying colour, slight irregularity in shape	Facings and foundations
4. Mild Stocks	Fairly hard. Have at least two faces of good colour	Facings for housing schemes, schools and industrial buildings, etc.
5. Single Rough Stocks	Very hard, irregular in shape	Foundations, garden walls, etc.
6. Common Stocks	Soft, of regular shape	As a backing brick or in face work with a rendered finish

AND RED AND MULTI FACINGS, ALSO MADE FROM THE SAME BRICKEARTH, SAND FACED IN A VARIETY OF SHADES, MACHINE MADE AND HAND MADE IN 2" AND 2½".

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(Tel.: Chelmsford 2595)

*C. Burley Limited,
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(Tel.: Sittingbourne 499/500)

*Cement Marketing Co. Ltd.,
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London, S.W.1.
(Tel.: ABBey 3456)
(Works in Kent)

Cremer, Whiting & Co. Ltd.,
Faversham, Kent.
(Tel.: Faversham 2233)

The East Acton Brickworks
& Estate Co. Ltd.,
Brookside Brickworks, Hayes,
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(Tel.: HA Yes 0164)

Eastwoods Ltd.,
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London, E.C.1.
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(Tel.: Newington 338)

*Southend-on-Sea Estates Co. Ltd.,
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Southend-on-Sea, Essex
(Tel.: Southend-on-Sea 66293)

Wills & Packham Ltd.,
Sittingbourne, Kent.
(Tel.: Sittingbourne 43)

*C. S. Wiggins & Sons,
Hart Road,
Thundersley, Essex.
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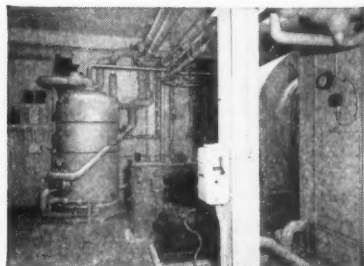
* Producing London Stock Bricks only.

All types of service installation

PLANNED AND INSTALLED AS A SINGLE CO-ORDINATED OPERATION

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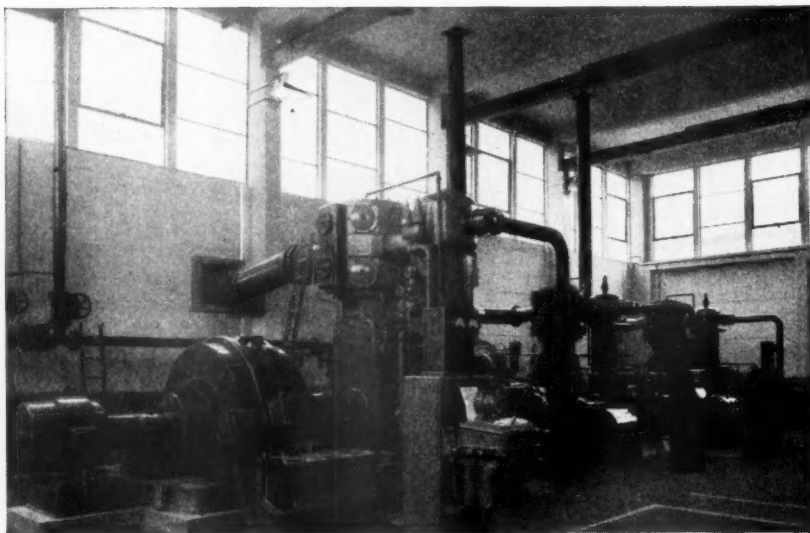
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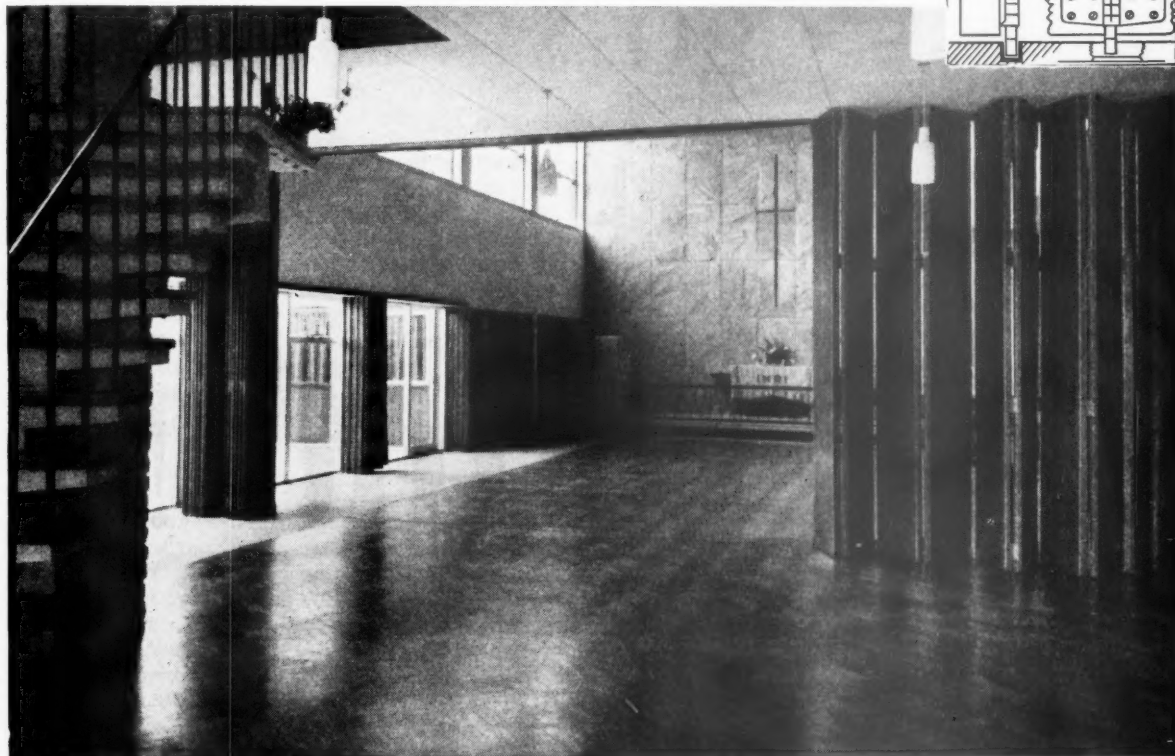
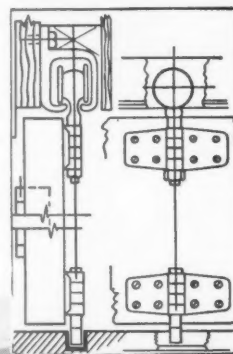
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MARCH 1959

THIRD SERIES VOL. 66 NUMBER 5 THREE SHILLINGS AND SIXPENCE

EDITORIAL

Association of Official Architects

The General Meeting of the Local Government Architects' Society was held at the R.I.B.A. on 31 January. Those present at the meeting included 60 delegates representing 92 offices.

Mr. Arthur Ling [F] had been invited to take the chair at the meeting and in his introductory remarks referred to the local government achievement in the post-war years in the organisation of building work, costs and programming as well as in improved aesthetic quality of architecture. He said that 50 per cent of architects were now working with local government or national organisations.

A message was read from the President, R.I.B.A., and Mr. Gordon Ricketts, Secretary for Professional Relations, in his address to the meeting, said that the R.I.B.A. could offer tangible help to the new Society but he was not certain at this stage what form that help would take.

The purpose of the meeting was to consider the report of the Provisional Executive Committee appointed last June.

Mr. Thurston Williams [A], the Chairman of the Provisional Executive Committee, moved the acceptance of the report which included the draft constitution. This report was accepted with two amendments and five items were referred to the Committee for further consideration.

The Provisional Executive Committee was also confirmed in office for a further three months to organise the election of the first General Council.

The new title of the Society is now the Association of Official Architects and the address is 66, Portland Place, London, W.1.

Factory Equipment and Heating, Ventilation and Insulation Exhibitions. Earls Court 7-17 April 1959

The organisers of these exhibitions are prepared to make a certain number of tickets for both exhibitions available, free of charge, to members of the Royal Institute. Those requiring tickets should write to the Secretary, R.I.B.A., 66 Portland Place, London, W.1, enclosing a stamped addressed envelope and marking their envelope 'Factory Equipment Exhibition' in the top left-hand corner.

Record Entry for Architectural Competition

The architects' competition for the design of small houses, jointly sponsored by IDEAL HOME magazine and the R.I.B.A., has attracted 1,523 entries. This is the highest entry which the R.I.B.A. has on record for an architectural competition in Britain.

Architects were invited to submit designs for small houses and these have now been assessed by Mr. Clifford Culpin, O.B.E., M.T.P.I. [F], Mr. Eric Ambrose, B.A.(Arch.) [F], and Mr. Peter Dunham [F].

Thirty designs, suitable for a variety of different sites, were chosen. Between them they will cover a wide range of prices, from the £4,500 maximum to well below that figure, and of sizes up to 1,100 square feet in floor area.

After the winning designs have been published in book form later this year, the plans will be made available to both builders and the general public.

Cover Picture

The Stratford Festival Theatre, Stratford, Ontario, designed by the Toronto firm of Rounthwaite and Fairfield, was awarded the Gold Medal in the competition for the Massey Medals for Architecture, 1958. The Massey Medals were first awarded in 1950 and later in 1952 and 1955 in recognition of outstanding examples of Canadian achievement in the field of architecture.

There were 158 entries from all parts of Canada in 1958, and after being shown at the National Gallery of Canada, they were then sent out as a travelling exhibition to Canadian cities and art centres.

The Stratford Festival Theatre was opened in July 1957. It has a circular plan, 200 ft. in diameter, and can seat over 2,000 people. The cover photograph shows part of the 34 folded concrete slab roof extensions, the construction of which involved pouring a thousand tons of hot concrete at a 25 degree angle, 40 ft. above ground, much of the time in sub-freezing weather.

In his recent book *Looking at Architecture in Canada*, Mr. Alan Gowans says it is quite unlike a Greek theatre, and although the stage has some kinship with that of an Elizabethan theatre, the rest of the structure is far more considerate of the audience than was then thought necessary.

Council Business

The Council met on 3 February with the President, Mr. Basil Spence, in the chair.

A message of congratulations on the occasion of his 90th birthday was sent to Mr. W. T. Plume [*Hon. A.*], Editor of *THE BUILDER* from 1918 to 1937.

It was agreed, on the recommendation of the Science Committee, to sponsor jointly with the Building Centre a Third Competition for Trade and Technical Literature to be held during 1959 on the same basis as the two previous competitions.

On the recommendation of the Practice Committee, it was agreed to discuss with the A.R.C.U.K. arrangements for relaxing the restriction which operates against architects having their names in local Chamber of Commerce Year Books under classified professional headings. Other leading professions allow the names of their members to appear in these directories, and the Council thought that such a relaxation would bring the architectural profession into line.

A legacy of £1,500 has been received under the will of the late F. E. Pearce Edwards [*F.*] upon trust for the provision of an annual prize to be known as the Pearce Edwards Award to be restricted to official architects and/or members of their staffs (defined as architects remunerated by salary and/or employed in an official architectural department by any Government, local authority or public company within the British Commonwealth and irrespective of age) for a design thesis or essay based on a specified subject appertaining to or connected with any branch of the work of such official architectural departments.

The Council accepted this bequest and instructed the Board of Architectural Education to consider the appropriate administrative arrangements for the Award.

The question of proposed study groups on urban motorways came up again on the agenda.

The Council received a report on the results of action so far taken in pressing for having available qualified architectural advice at the outset in the study of planning for urban motorways. It was understood that support of the Institute's case would be forthcoming from the Royal Fine Art Commission, the Central Council of Civic Societies, the Town Planning Institute, and the Civic Trust. In addition the Institute's approach to the Arts and Amenities Committee of Members of Parliament is receiving consideration. Presidents of Allied Societies in the provinces, where study groups are being set up, reported on action taken locally to bring home the necessity for adequate town planning and civic design in relation to the new feeder roads.

The President said he had written letters stressing the importance of this matter to leading national newspapers.

It was agreed that this subject was of such paramount importance for the future appearance of town and country that every effort should be made to bring home to those concerned the danger of planning on too restricted a technical front. As an immediate step, it was agreed to draw the attention of all members to the matter by means of a study to be published in the *R.I.B.A. JOURNAL* and to ask the technical press to help by giving the maximum publicity to the subject.

A further development of the Institute's campaign would be the production by the Town and Country Planning and Housing Committee of a more detailed study including a survey of similar developments in European countries and the publication of a treatise with suitable illustrations. It is intended that this shall be launched with the help of the national press.

The Council appointed a committee to carry out a review of the present style and contents, both editorial and advertising, of the *R.I.B.A. JOURNAL*. The committee will consist of Mr. A. W. Cleeve Barr [*A.*], The Hon. Lionel Brett [*F.*], Mr. J. C. Eastwick-Field [*A.*], Mr. W. G. Howell [*A.*] and Mr. J. H. Napper [*F.*].

Other notes from the Minutes of the Council appear on page 183.

The Living Town

Anyone with strong views on urban renewal will be interested in a one-day Symposium to be held at the *R.I.B.A.* on Friday, 22 May, beginning at 10 a.m.

It is called 'The Living Town'—a Symposium on Replanning and Renewal. The chairman will be Sir William Holford [*F.*].

The speakers will be Mr. Hubert Bennett [*F.*], The Hon. Lionel Brett [*F.*], Sir Hugh Casson [*F.*], Mr. Peter Chamberlin [*F.*], Mr. Richard Edmonds of the L.C.C., Mr. Percy Johnson-Marshall [*A.*], Mr. Arthur Ling [*F.*], Professor Robert Matthew [*F.*] and Mr. David Percival [*A.*].

Tickets cost £1 each and include admission to the Symposium, a copy of the printed report, coffee and tea, but not lunch.

Please write to the Secretary at the *R.I.B.A.* for an application form for tickets and mark the envelopes 'Symposium—The Living Town.'

There is also an exhibition on the same subject, designed by the Society for the Promotion of Urban Renewal in collaboration with the *R.I.B.A.* and the Civic Trust. It will remain on view until Wednesday, 27 May.

Paris Salon, 1959

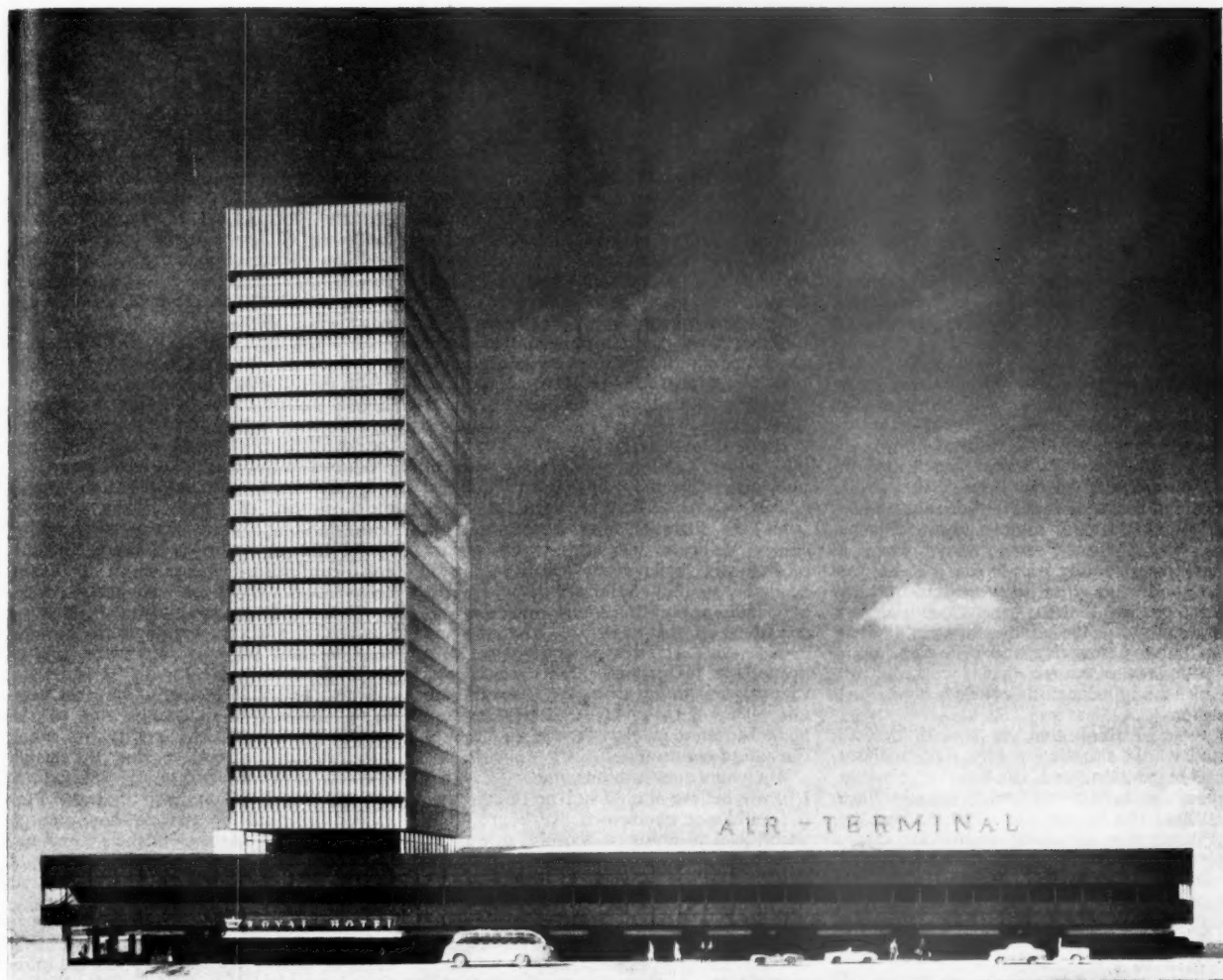
Members who wish to exhibit drawings and/or models in the architectural section of the Paris Salon which is being held in May at the Grand Palais, Champs Elysées, may obtain particulars and the necessary forms from the official agents and packers in Great Britain, who are Messrs. James Bourlet & Sons, Ltd., 17 and 18 Nassau Street, Mortimer Street, London, W.1 (MUSEUM 1871 and 7588).

The reception days in this country are 16–23 March at the above address.

Correction

Mr. H. J. Whitfield Lewis, M.T.P.I. [*A.*], Housing Architect, London County Council, has been appointed County Architect, Middlesex County Council, in succession to Mr. C. G. Stillman [*F.*].

It is very much regretted that an erroneous report of this appointment which had been circulated in the press and broadcast over the air, was repeated in the February *JOURNAL*.



Exhibition of the work of Arne Jacobsen: model of Hotel and Air Terminal for S.A.S., Copenhagen

Honour

Mr. J. L. Gleave, A.R.S.A. [4], has been elected Academician, Royal Scottish Academy.

Architects' Benevolent Society Mid-Summer Ball

Encouraged by the growing success of their Winter Ball (last year tickets were sold out six weeks before the day), the Ball Committee of the A.B.S. has decided to hold a Summer Ball in aid of the Society's funds on Friday 19 June. This will take place at the R.I.B.A., Portland Place, and thanks to the generosity of the Council in placing the building at the Society's disposal, they are able to offer an evening's non-stop dancing to two bands, with running buffet supper, for the modest price of 25s. There will also be a grand Tombola and several bars.

It is hoped that this addition to the architects' social calendar will prove as popular as the Winter Ball, especially to younger members of the profession.

Application forms for tickets will be available early in

April from the Hon. Organising Secretary, A.B.S., 66 Portland Place, W.1.

R.I.B.A. Diary

THURSDAY 26 FEBRUARY TO WEDNESDAY 25 MARCH. Exhibition of the work of Arne Jacobsen in the Henry Florence Hall. Mon.-Fri. 10 a.m. to 7 p.m., Sat. 10 a.m. to 5 p.m.

TUESDAY 10 MARCH, 6 p.m. General Meeting. *Royal Palaces in England from Norman to Victorian Times*, by John Charlton, M.A., F.S.A.

TUESDAY 17 MARCH, 6 p.m. Science Lecture. *Hostels, Hotels and Motels*, by Bryan P. Westwood, A.A.Dipl. [F], Louis Erdi [F], and Professor S. R. Sparkes, M.Sc., Ph.D., M.I.C.E., M.I.Struct.E.

THURSDAY 26 MARCH, 12.30 p.m. to TUESDAY 31 MARCH inclusive. R.I.B.A. offices and library closed for Easter holiday.

THURSDAY 26 MARCH to TUESDAY 31 MARCH inclusive. R.I.B.A. canteen closed for Easter holiday.

MONDAY 6 APRIL, 6 p.m. Library Group. Dr. Helen Rosenau will introduce an evening on French 'Academic' Art, 1779-1789.

TUESDAY 7 APRIL, 6 p.m. General Meeting. *Early Industrial Architecture*, by Bryan H. Harvey.

Address to Students by the President

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A.

At the R.I.B.A., 3 February

YOU WILL HAVE HEARD that Professor Ludwig Mies van der Rohe has been awarded the Royal Gold Medal for 1959, and I feel certain that there is universal approval of this award because Mies van der Rohe is a world influence in architecture—a man advanced in years when recognition from the R.I.B.A. has come late in life.

I can well remember immediately after the war when I was demobilised, that Mies van der Rohe was all the rage. The young architects in the schools of architecture practically worshipped him. His philosophy of the delicate enclosure of space and pure structural expression swept through the student population, almost like a hot Gospel. But I must admit to being considerably puzzled recently, when I have heard young people say that he was no good at all, that his work had nothing for them and that the great Corbusier was their idol and his philosophy was all that mattered in this day and age. The implication was, of course, that if work did not show the influence of Corbusier it was just rotten.

Now, I think that we should look at this whole situation coldly, and without undue passion, and we must admit that there are three giants now living who have affected the face of our cities, and as the young know all about them, our future cities as well. I think that their influence will go far and wide. I refer, of course, to Frank Lloyd Wright, Le Corbusier and our most recent Royal Gold Medallist, Mies van der Rohe.

It is of great interest to me that they have created fashions in design which, like fashions in women's clothes, go in and out with alarming rapidity. But I would like to point out if possible, the motivating force behind these three masters. I think they all have one thing in common—it is a strong desire to create architecture: and it is architecture they care about. Mies is reported to have said that he did not wish to be known as an original architect, but only a good one, and this points to a fundamental dedication through his own personal faith to the creation of works of architecture. We, as architects, must respect this point of view; it is the quality of his work that matters, and whether it qualifies as great architecture.

I am convinced that all great architecture has the eternal constants. There is something in common.

First of all, it is the sensitive enclosing of space, where the emotional and intellectual response in the critic or viewer, or the man in the street, is strong and positive, and he feels it. The great space, like St. Paul's Dome, which *is* architecture, never fails to impress me through its sheer volume, and the magnificent way that space

is enclosed. In exactly the same way, I think Mies throws around a spider's web of delicate engineering, creating architecture of a rare beauty. Corbusier, on the other hand, creates space of a different character, strong, beautifully sculptured, thrilling and exciting, in its abstract form; he encloses space with rhythms of a different kind—the depth of material and weight come into it, showing perhaps the opposite approach. We have, of course, a superb example of this in his Chapel at Ronchamp.

Frank Lloyd Wright is very diverse in his works, and some of his human interiors, especially his own personal houses, show a flow of intimate space from one chamber into another. He, of course, dedicates his work to the service of man, he believes in organic growth, he believes that buildings should grow almost like plants. When one sees his creations, in the desert of Arizona, and in his native America generally, there is a mysterious indigenous quality about this very original architecture. We all await with interest his latest great work, the Guggenheim Museum in New York; and this at the age of eighty-nine!

But where does fashion come in? Fashion I firmly believe should not be discounted; it should not be thrown overboard. It is useful as a stimulus; it is useful as a prop. It tends to give confidence to lesser mortals. But I think this is where it ends. The fact that Mies or Corbusier or Frank Lloyd Wright does something spectacular should not cloud the whole vista, but be taken as one great man's approach to the problem, and if lots of people like to think in this way it may create a fashion, but it is only a stimulus and not an end in itself. I can't help thinking that some of the other and deeper facets of modern architecture such as structural expression, the use of materials that are suited to their purpose, and various other philosophies which get tied up in a sort of architectural code of ethics, are in themselves stimuli. I believe that they stimulate the artist and give him confidence and feed his integrity: but in the end one has to ask oneself 'Is it architecture?'

Early in this century a great deal was written about functionalism. We all know that the early theories, that if a thing functioned it was bound to be beautiful, have been disproved time and again. But function should also be regarded as a stimulus. It can clear the mind and simplify the problem if one is interested in function; it is a stimulus but it cannot be the final goal. Here again the question has to be asked, if function is an important stimulus, does it produce in the end architecture?

In my Presidential Address, I drew some conclusions from beautiful buildings in the

Acropolis in Athens. It has often puzzled me that the columns and entablature, beautifully worked in pentelic marble with engineering precision, culminating in that supreme work of art, the Parthenon, was made up of forms entirely designed for wooden construction, forms that had a structural significance in wood which are purely decorative in the final form on the Acropolis.

How is it, then, that the Parthenon is great architecture?—because I firmly believe it to be that. I can't help thinking that the Greeks passed through the phase of truth in structural expression and entered into the sublime portals of perfection; they produced in the end great architecture.

I think that another constant, besides the enclosure of space, is the complete understanding of scale. The art of designing to the human stature is a subtle, difficult and interesting phenomenon. I firmly believe that we British architects understand this extremely well, and believe me I consider it a very great gift to be able to understand this very important facet of great architecture.

I also feel that quality is another constant. Quality, of course, is one of the eternal ingredients, but quality has many interpretations. I believe that the rough concrete of some of Corbusier's buildings has quality; I believe also that the Parthenon in pentelic marble has quality. Our cathedrals, glorious in their stone and their beautiful carving, have quality. I believe that Mies's Seagram building has great architectural quality.

These never go out of fashion. These are only three of the elemental properties that make up great architecture. There are other constants like unity, vitality, conviction and evidence of genius in the author. Of course, there are stimuli which drop away when current conditions are forgotten and have to be looked up in history books; I refer to the social problems, the technical problems and the economic problems. All these drop away like dead leaves leaving the building stark and naked to be seen for what it is. Even today when we go into an Adam house, we look at it as architecture, we appreciate the space, we look at the doors, the proportions and scale, we look at the furnishings, we do not condemn by saying that the kitchen is very far away and most inconvenient, because in Robert Adam's day there were many servants. We do not consider the plumbing and the heating arrangements inadequate by today's standards as crippling. We look at it as architecture.

I must say that I was fortunate in experiencing one of the great privileges that could be afforded to any architect: that is to work with a genius. I worked with Lutyens many years ago, a quarter of a century to be exact, and recently when I visited Liverpool, where I am building

a physics building, which, incidentally, blew up, I went into the crypt of the Roman Catholic Cathedral there. I had recently visited Ronchamp and I was struck by the similarity in the weight and strength, and the desire to create space using depth of material, strongly modelled. Ronchamp to me is very similar in essence to the crypt of Lutyens' Cathedral in Liverpool. The mouldings, of course, are palladian in the crypt, where Corbusier does not use mouldings at all, but there is this understanding of what great architecture is, that is common to these two great men.

I would like to stick my neck out now and make a prediction. I think that Lutyens will come back into favour in the future. He has been under a cloud since his death, but I think there will be a gradual coming back to the appreciation of this very great man.

As a sidelight on these geniuses is an interesting common factor, that is their attitude towards their clients. When Frank Lloyd Wright was asked his opinion of clients, he said: 'Oh, clients? Poor creatures.' There is, of course, the story of Frank Lloyd Wright which I heard from the lips of Eddy Kaufmann whose father had commissioned that famous house Falling Water. He wished to have a house party and he got in touch with the caretaker who reported that the roof was leaking into the dining-room of the guest house, and with great difficulty Kaufmann senior got in touch with Frank Lloyd Wright over a network of telephones. He said: 'The roof's leaking in my guest house at Falling Water', rightly named. And Frank Lloyd Wright was quiet; he said eventually, 'Where is it leaking?' 'In the dining-room, on top of the table, and what am I to do?' Frank Lloyd Wright answered without hesitation, 'Move the table.'

Lutyens had the same attitude, and this story I am going to tell you illustrates his puckish sense of humour. In one of his country houses for which he was famous, he had designed a bedroom with a double back-to-back fireplace going through the centre of the room leaving it as a free-standing element. When the client asked 'Why?' Lutyens said: 'I thought it would be very nice to chase a woman round that.' This shows amazing self-confidence, which I think is common to all people who are seed-sowers of great architecture.

But I have left to the last one great factor which cannot be ignored. The personal belief in what you are doing. There must be no hesitation. There must be complete accord within yourself. There must not be the flipping through the journals to see what you can pick up to make your design look all right. It must be more fundamental than that. It is in other words dedication to this great art of architecture, and to dedicate yourself with belief, because I believe that in every one of you rests seeds of the British genius, in varying degrees of course—the seed of quality, of scale, of appreciation of material, and of humanity. Nurture it: do not be apologetic, allow it to grow, be proud of it, it is your heritage.

Criticism of Work Submitted for the R.I.B.A. Prizes and Studentships, 1958–59 by Edward D. Mills, C.B.E. [F]

Mr. Edward D. Mills: The task of giving the annual Criticism is both an honour and a responsibility, and as I recall the notable critics of the past I am well aware of my own inadequacy as a critic.

The *Oxford Dictionary's* definition of a critic is: 'one who passes judgement'. In earlier times apparently it meant 'one who passes judgement unfavourably'. This clearly defines my task tonight, for I shall make both unfavourable and favourable comments, and also offer suggestions of some value, I hope, to both present and future competitors.

Critics are themselves often criticised. Disraeli is recorded as saying: 'You know who critics are?—The men who have failed in Literature and Art', and a certain Mr. Dekker once said, 'Take heed of critics, they bite like fish at anything, especially at bookes'. With those rather unkind comments on critics in mind and leaving you to decide upon their significance, I will start 'biting'.

One of the jobs of a critic is to pass on to the competitors for the R.I.B.A. Prizes and Studentships the comments and advice of the various juries who have considered the entries and made the various awards. These points will be made as we proceed.

R.I.B.A. Intermediate Design Prize

There were only two design prizes open for competition this year and I propose to deal with them first, starting with the R.I.B.A. Intermediate Design Prize. This is confined to Probationers and Students of the R.I.B.A., and the prize is a certificate and £100 to enable the winner to spend at least three weeks in Europe studying contemporary architecture. This year 275 competitors took part in the preliminary competition and ten were allowed to proceed with their final drawings.

The subject, 'A Small Riding Establishment with Covered School', was a most interesting one. The jury spent a great deal of time examining the entries before deciding to split the prize between 'Bonzo' and 'Odds-On'; it was even suggested at one stage that a horse might be co-opted on to the jury as representing the 'user's interest'. The idea was rejected as it was felt that certain practical difficulties might present themselves.

Considering the joint prizewinners, the jury felt that 'Bonzo' had presented an excellent set of drawings with very good perspective sketches, and the architectural character of his scheme was most satisfactory. The general layout, grouping and detailing of the buildings all suggested a sensible appreciation of the problem set in the programme. Two points prevented him from winning the prize outright: first, the detailed planning of many parts of the

constituent buildings was too tight—he has obviously been misled by his own perspective sketches. The common room, lavatories and harness room being particular cases in point. While these would probably work, they were unjustifiably cramped and access from changing rooms to the common room is not protected from the weather. Secondly, for some undefined reason, 'Bonzo' has departed from his esquisse and the programme by providing a riding hall which is not enclosed. In spite of these failings the jury were impressed by the scheme as a whole.

The joint winner 'Odds-On' also presented an attractive set of drawings, with particularly well-developed sketches showing a group of buildings with good architectural character. His plan is a good and workable one, and his structure is sound; it would stand up—unlike some suggested by other competitors.

The jury felt that 'Odds-On' did not give enough information on his drawings concerning the materials he intended to use; they also failed to see the purpose of the raked 'brise-soleils' and considered the link wall between the school and the stables to be arbitrary and pointless.

The other eight schemes all possessed major faults that put them out of the running, the most common of which were inconsistency in character, poor planning and layout, doubtful structural design, and scrappy or inadequate presentation. 'Bonzo's' drawings will repay careful study by the unsuccessful candidates.

The Victory Scholarship

The other design prize this year is the Victory Scholarship, which is for the advancement of architectural education and open to members of the R.I.B.A. and students who have passed the final examination, carrying with it a silver medal and £150. The subject this year was one that should have produced very much better results—'Pleasure Pavilions in Richmond Park near London'. An actual site was selected and 132 candidates took part in the preliminary competition, ten being allowed to proceed with their final drawings. The jury were frankly disappointed with the quality of the work submitted and decided not to award the Victory Scholarship, but to give three certificates of Honourable Mention to 'Vaasa', 'Nobism' and 'Allilo'. Of these three 'Allilo' could, with more care, have won the prize.

On the very fine parkland site he has quite rightly allowed the park to dominate the buildings with an informal layout of simple buildings linked by covered ways. So far—so good—if he had completed his work and presented his design adequately he would have been £150 better off

tonight, but his drawings are incomplete, his presentation inadequate and careless—even the north point is inaccurately drawn and his lettering is abominable.

Although his linking covered ways appealed to the jury, 'Allilo' gives no indication as to how they are supported—according to his drawings they have no visible means of support. His restaurant could have been nearer to the lake with advantage. 'Vaasa' gets a Mention, but his many faults put him out of the winning class; his design is over elaborate, the scale of his buildings is too big, and his layout too formal for an English park. In wet weather the walk from the car park to the main pavilions would be too long and his bandstand is too isolated. The view from the restaurant is dull and takes little account of the natural beauty of Richmond Park. The detailed planning of the various buildings is well thought out.

'Vaasa's' drawings are almost unreadable—practically no colour has been used; at least the ponds could have been tinted to help the jury to understand his layout and the relationship of buildings to surroundings.

'Nobism' also gets a Mention, largely I feel for his presentation, delightful sketches of the buildings in their park setting; the buildings themselves are poorly designed, clumsy in detail and harsh in outline. The layout is uninteresting, but he has given thought to the traffic circulation problems.

The two major design prizes this year have failed to produce any outstanding work, and many of the submissions, particularly for the Victory Scholarship, were handicapped by incomplete drawings, poor presentation, and a general carelessness in planning and detail.

The Silver Medal for Measured Drawings is open to any member of the profession, with a prize of £75, but attracted only three entries. The jury awarded the prize and medal to 'Arch', who submitted a set of beautifully drawn sheets. The subjects chosen were very interesting and unusual buildings, small in size, which he has studied very carefully, and the jury highly commended his work. He selected a Post Mill at Bourne and a Church Barn at Burwell as his subjects.

'Aslahk' chose a large subject, St. Philip's Cathedral, Birmingham, which was inadequately drawn—his freehand work being particularly poor. The sheets submitted by 'Echinus' of the north elevation of Sutton Place, Guildford, were beautifully drawn, but the jury felt that they were lacking in character, too mechanical and repetitive, telling them very little about the building as a whole. A fantastic amount of detail was included but the final result was a fragmentary study, giving no clear picture of a building.

The Owen Jones Studentship

The study of the application of colour as a means of architectural expression should appeal to architects and students and yet only four entries were received for the

Owen Jones Studentship, which offers a certificate and £250 to enable any member or student of the R.I.B.A., over 21 years of age, to tour for not less than eight weeks to study colour in architecture.

The jury awarded the Studentship and £250 to 'Laplander'. Their comment on his entry is as follows: 'Competent and unemotional, sensitive but lacking in sparkle, not much understanding of light and shade in colour in his sketches, notwithstanding a good line.'

They questioned whether 'Laplander' has actually seen the mosaics at Ravenna which he reproduces, because of the lack of accuracy in both colour and form of these particular drawings. However, he will now be able to visit Ravenna with his prize money and I would strongly recommend him to do so; as a result he may be able to get a bit more sparkle into his sketches.

'Drake' submitted insufficient work; the jury thought his entry was 'vigorous but vulgar', and advise him to try again next time.

'Till's' work was immature, neat but feeble; and 'Decor's' enthusiastic but muddy and confused.

The Silver Medal for an Essay

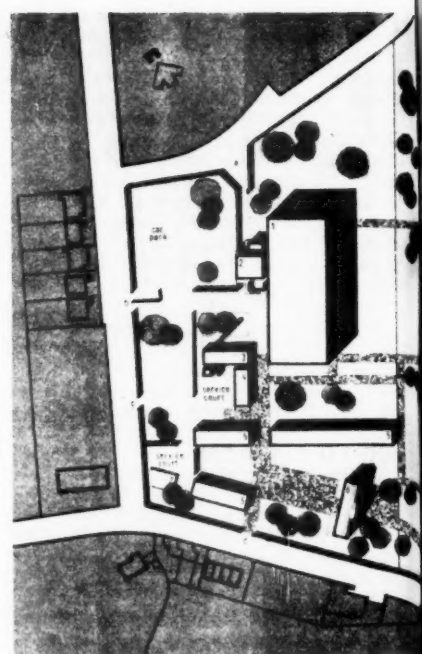
This is open to any R.I.B.A. member over 21 and is accompanied by a prize of £50. The jury were pleased to see a larger entry than of recent years—eleven essays were received—but regret that the standard was so low. It was only reluctantly that they decided to make an award at all. Generally the entries gave the impression of being student theses rather than worthy pieces of writing in essay form.

The essay by 'Verbascom' on 'The Architecture of Environment' was a philosophical essay of some imaginative power. The author demolishes effectively several current town-planning theories, thereby providing material for stimulating thought.

An Honourable Mention goes to 'Revival' for an essay on 'The Architecture of W. H. Lethaby', not because this was successful as an essay but solely because in the course of research many useful facts were brought together.

The Arthur Cates Prize, with a certificate and £115, is for the promotion of architecture in relation to the application of geometry to vaulting, stability of edifice and design, admittedly not a subject that would appeal to the majority of students. But that is no excuse for the sole applicant, Mr. T. L. Marsden, failing to comply with the official published conditions. The entry appears to have little regard for the requirements which relate the prize to Classical or Renaissance architecture, and the application of geometry to vaulting and stability, and the jury have, therefore, not awarded the prize.

So far my comments have been unfavourably critical and it is, therefore, pleasant to turn to the two major post-graduate research fellowships, both of which attracted an impressive list of applicants and which have resulted in two



SITE PLAN one inch represents fifty feet

1 covered riding school	4 general store with tractor garage	7 main building
2 service building with changing rooms etc.	5 stable block for 25 horses	8 existing building
3 narrow road with roller form & two store		
a entrance for pedestrians and cyclists	b entrance for members and visitors	
c entrance for service vehicles	d entrance for horse traps	

R.I.B.A. Intermediate Design Prize: Subject 'A Small Riding Establishment with Covered School'

awards which should produce valuable results.

Alfred Bossom Research Fellowship

First, the Alfred Bossom Research Fellowship, open to all members of the Institute. From the eight applications the jury finally selected Mr. G. E. Michell, who receives a fellowship of £250 to enable him to visit the United States to study the architectural implications of fast motorways. This is a most important field of research which urgently needs to be investigated in view of the new roads programme in this country.

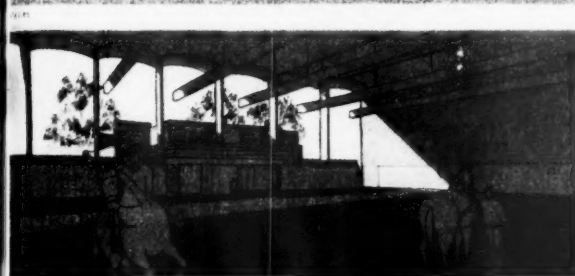
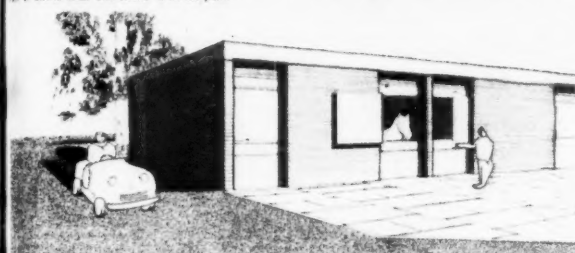
Mr. Michell is an experienced research worker and we shall look forward to the results of his study in due course.

The Rose Shipman Studentship Trust for the study of architecture attracted a record field of 18 applicants and the jury awarded a Studentship to the value of £600 to Mr. H. L. Gloag, who also wishes to go to America, the subject of his choice being 'The Lighting of Windowless Buildings'.

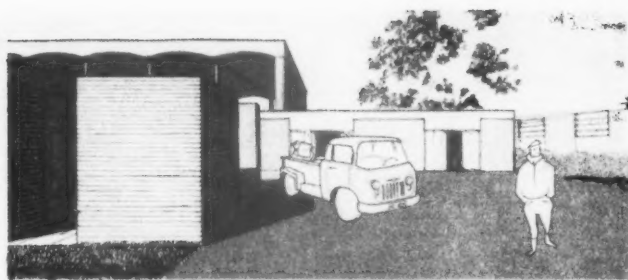
Here again is a most important subject and an experienced research worker who is going to work on it. I hope that he will look into the economic aspects of this problem. Mr. Gloag's report should be of immense value to the profession when it is ultimately published.



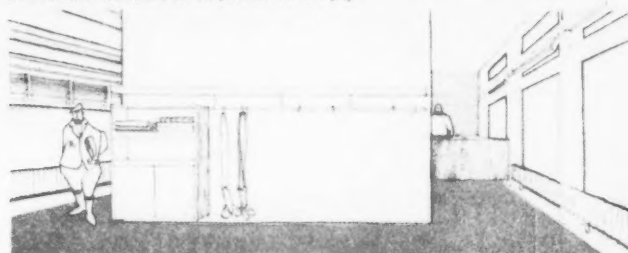
View of school building with stadium in the background



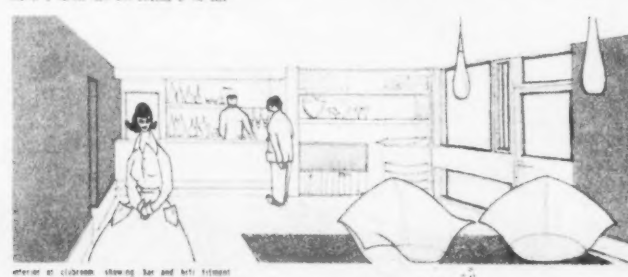
Interior of school showing view of terrace of classroom



Section of school building showing room, bathroom, general store and tractor garage



Interior of school building showing view of terrace of classroom



Interior of school building showing view of terrace of classroom

Portions of two sheets of drawings by 'Bonzo'—Mr. Noshirwan Cowasjee [Student]

In spite of the good standard of entries and the excellent choice made by the juries for these two awards, they have asked me to comment on the type of application which stands the greatest chance of success.

For future entries the following hints might be of value:—

First, applicants must understand the field they propose to study and explain their intentions clearly. They must also choose a subject of sufficient importance. In connection with that, for one of the major research prizes one enterprising gentleman wanted to study dovescots of the Northern Hebrides. With the amount of money available in the prize he could have bought the lot!

Secondly, intended research must be original and not merely finding out what other people are doing.

Thirdly, the work must be capable of being carried out by one man in the time specified, and not require the services of a B.R.S. team for five years.

If you observe these three simple rules you cannot fail.

The Henry Saxon Snell and Theakston Bequest, worth £150, is offered for the study of the improved design and construction of hospitals and similar buildings. It is open to any member of the R.I.B.A.,

and surprisingly only attracted two entries. The jury awarded the prize to Mr. W. J. Jobson, of whom they said: 'He is capable of adding a testimonial to the R.I.B.A. collection of Saxon Snell reports worthy of the donor.' High praise indeed from a jury of experts.

The other applicant, Mr. David Hubert, should take comfort in the fact that the jury said: 'He was unfortunate in having such powerful opposition, he should be encouraged to enter again as he was a very close runner-up.' Mr. Hubert must not, therefore, be too despondent but try again next year.

The Hunt Bursary and £95 for the study of housing and town planning only attracted two applicants, neither of which came up to the required standard and no award has been made. To summarise the jury's views, neither of the entries were of sufficient weight or provided a sufficiently worthy contribution to this important subject.

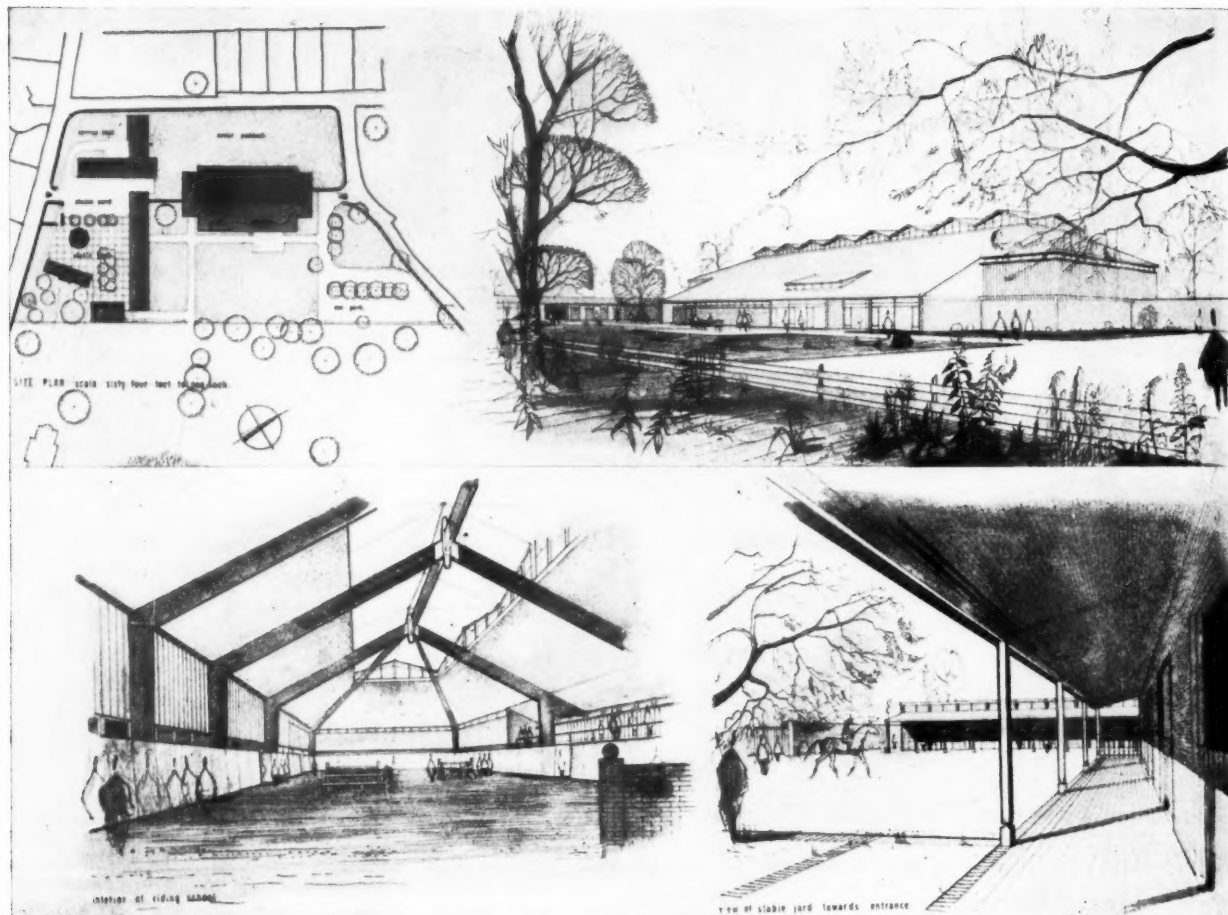
The Neale Bursary of £125 for the measurement of old buildings goes to the only entrant, Mr. R. B. Wood-Jones, who submitted a remarkable portfolio consisting of 56 sheets of measured drawings with maps and diagrams devoted to the lesser

historical architecture of the Banbury region up to the end of the 18th century. The jury considered this to be a most valuable contribution to the understanding of the subject and approved his future plan to do a similar survey of West Suffolk. They suggest that this future work might usefully be augmented by a more detailed record of constructional decoration as an aid to sympathetic restoration.

The Athens and Delissa Joseph Bursaries of £175 for study at the British School at Athens is open to teaching staff of Schools of Architecture, and this goes to Mr. G. M. Toplis of the Regent Street Polytechnic School of Architecture. We hope that he will enjoy his visit to Greece, and, following the President's example, will no doubt discover that colour slides of the Parthenon can be useful at any time.

Finally, we have the smaller prizes: £10 worth of books for students of **Art Schools and Technical Institutions** for a set of drawings (Intermediate Testimonies of Study). This was awarded to the only entrant, Mr. Alec Maund.

Twelve essays and one set of drawings were submitted for the **Public and Secondary Schools Prizes**, but no award was made as the jury felt that none of the



R.I.B.A. Intermediate Design Prize: portions of two sheets of drawings by 'Odds-On'—Mr. Hugh Cannings [Student]

entries reached the required standard. Competitors should note that what is required is a critical appreciation of a building or group of buildings based on personal observation, and not the usual dreary factual guide-book stuff cribbed from local histories and travel guides. It should be remembered that there are in this country buildings other than Gothic cathedrals and parish churches worth studying.

Only three sets of sketches were submitted for the **London Association of Master Stonemasons Prize** of £50 offered to students. This is an interesting little competition which has been brought up to date to attract more entries—it specifically calls for a study of natural stone in *modern* buildings. The candidate who submitted a set of sketches of *historic* examples eliminated himself and that left only two. The jury very generously, in my opinion, gave consolation prizes of ten guineas to each of these, Mr. J. C. Knowles and Mr. J. M. Mainprize (what an appropriate name!). Mr. Knowles's entry was superficial, and pictorial only—pictures mainly taken, I regret to say, from technical journals—with no technical detail, while

Mr. Mainprize was too technical, presenting only small details unrelated to the whole building. If the two could have combined into one entry it would have been a winner.

This brings me to the end of this year's prize entries. I have tried to put before you the views of the various juries who have once more performed their difficult tasks conscientiously and untiringly; they all deserve our grateful thanks. I have also tried to keep my own particular 'hobby horses' securely in their stables, but I want to repeat the substance of what Peter Shephard said in his excellent criticism last year. The entries, with a few notable exceptions, were scanty and poor and I, too, am astonished that nobody seems to want these considerable sums of money—which, let me remind you, are tax free. Are we as a profession too well off, too busy, or uninterested in research or extramural study? It has been suggested that the prize programmes themselves are out of date, but where they have been 'modernized' this has often still failed to produce the quantity or quality of submissions they deserve.

I have been asked by the officers of the Board of Architectural Education to make a report to them on this year's results and I shall try to suggest ways in which the appeal of the prizes can be widened, but the ultimate responsibility rests with the competitors. If members have suggestions to make concerning the R.I.B.A. Prizes and Studentships, I should be grateful if they would send them to me in writing c/o The Secretary of the Board of Architectural Education. It must, however, be remembered that in many cases the situation is complicated by the terms of the original bequests and this often raises considerable legal problems which make what would appear to be obvious reforms difficult. However, all new ideas are worth consideration, and it should be possible to make some improvements.

One of the features of this year's submissions which concerns me particularly is the way in which competitors often ignore the published conditions, or fail to study them sufficiently. The requirements of the juries are all set out quite clearly in the official pamphlet, and there is no excuse for failing to observe clearly specified conditions.

A large number of the prize competitions are open to any member of the Institute regardless of age, and are not restricted to architectural students. I should like to see in the future years more entries from older qualified members of the R.I.B.A., particularly for the Essay Silver Medal, the Bossom Fellowship, the Saxon Snell Prize and the Hunt Bursary, all of which offer opportunities for study and research in important fields. Practising architects who feel the need for a break in which to carry out some useful field-work and at the same time enjoy a short spell of mental re-creation could well achieve these worthy objectives through the medium of one or other of the R.I.B.A. awards.

In the 1959-60 programme, in addition to most of the competitions we have considered tonight there are such awards as the Henry L. Florence Bursary, worth £400; the Godwin and Wimperis Bursary for the study of modern architecture abroad, worth £300; the Andrew N. Prentice Bequest, which offers £230 for travel in sunny Spain, and the Henry L. Florence Architectural Book Scholarship which will provide you with £200 to enable you to write that book you have had in mind for so long. These are all attractive and worthwhile enterprises which should appeal to students and qualified architects alike, and I sincerely hope that next year's critic will be able to sound a more cheerful note when he deals with the 1959-60 awards, than mine has been tonight.

[Critical comments on the work submitted by: Mobius, Banshee, Gormy-ruggles, Marco, Phrup, Reg, Ecce, Mopes, Roda, Schwurk, Sitte, Ranelagh, Cronimile, Lacrimans, and Francesco have been omitted from this report but are available to the competitors concerned on request.—Editor.]

VOTES OF THANKS

The Hon. Secretary, Mr. Richard Sheppard: I will now call upon Dame Evelyn Sharp, Permanent Secretary, Ministry of Housing and Local Government, to move a vote of thanks to the President for his Address, and to Mr. Mills for his review.

Dame Evelyn Sharp, D.B.E. [Hon. A]

I represent here this evening that poor creature, the client, and certainly for me it has been a most illuminating evening. The first thing which struck me is that to which Mr. Mills referred in his closing remarks. That is, what a glorious, glittering array of prizes there are before architectural students and members of the architectural profession, and how astonished I am to hear that the entry is rather poor. I propose to inquire myself whether laymen or lay-

women are eligible to enter for the essay competition. I spend my life writing essays and I do not see why I should not have a go at this one. If you choose a suitable subject like 'Damage Done by the Government to Architecture', I can enter.

The other very illuminating thing to me, the client, has been the sharpness of the criticism made by Mr. Mills, speaking for the jury. I was delighted to hear this, not because my heart did not bleed for those whom he castigated—who fortunately were only known by pseudonyms—but because speaking as a client I was so delighted to have glimpsed this piece of architectural education and this really tough criticism of the efforts being made by students. I should like to say as one who has been through this sort of thing, although not so thoroughly, that I hope that those who came in for the rough side of Mr. Mills's tongue will not be depressed or put out by what was said. It is absolutely first class that you should get such clear, constructive, and such trenchant criticism of what I imagine in many cases is among the fairly early products of your work. It is wonderful for you who have heard these matters of education and wonderful for me, the client, to feel that the architectural profession is taking its education so severely and so determinedly. Sometimes the client does wonder whether British architecture is in the doldrums. That is perhaps a Ministry of Housing and Local Government point of view because we only see selected specimens, mainly selected because even the local authority cannot stick them. Sometimes that is a tribute to them, but not always.

I have great pleasure on behalf of myself, and I am quite sure on behalf of you all, in proposing this vote of thanks to Mr. Mills for what he has shown us of the attitude of the profession to the students, and for the enormous amount of work that must have been put into these criticisms. I also wish to thank the President for an extremely entertaining as well as instructive Address.

Professor R. J. Gardner-Medwin, M.T.P.I. [F]: I have very great pleasure in seconding this vote of thanks and I should like to couple it with my thanks to you, Mr. President, for your splendid Address to students.

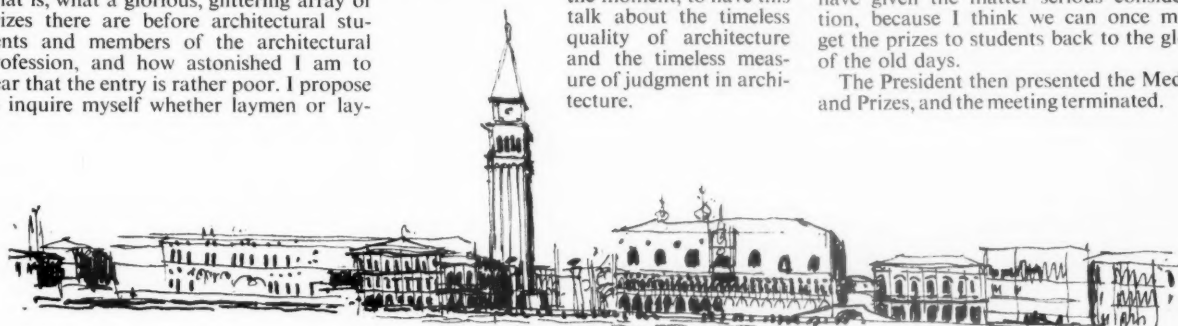
It was very good tonight, in the middle of the 'isms' and fashions and notions of the moment, to have this talk about the timeless quality of architecture and the timeless measure of judgment in architecture.

I think Edward Mills did a remarkable job giving you an extremely encouraging criticism, kindly and humorous, in spite of the most unfortunate standard of entry which by and large he described. I think it was remarkable that he made it sound so encouraging in the circumstances. This lack of enthusiasm lately for the prizes is very interesting. I think it is only partly explained by hard work and lack of money. I think that although there is money going here, it is not certain money and everybody wants to get a job and get down to it as soon as possible. It is not possible that students do not want to travel abroad. We were thinking about one of the greatest prizes of all—the Rome Scholarship—and wondering why there was this lack of enthusiasm to have money to live for a year in Italy. There must be something fundamentally wrong and we are trying to find out what it is. I suppose there is something wrong with some of the systems of awarding these prizes. There ought to be constant investigations into what is wrong and I would like to suggest that another body which might consider very deeply what is wrong with these prizes and why there is not more enthusiasm, is B.A.S.A. I have great faith in B.A.S.A. It is high time we had a council of student thought and here is a task for B.A.S.A. Money is going begging and yet nobody goes in for the prizes. One tends to find that those we think are good students and those who are most likely to benefit from going abroad are the least enthusiastic of all. What is the matter? Something has to be looked into. Mr. Mills was right to ask you to examine your thoughts about this problem of the prizes and I do support his appeal to older members, particularly the people staffing the schools, to take advantage of the senior research awards.

He gave a thoroughly trenchant and effective criticism of the work here, and I hope that what he has said and what Peter Shephard said last year will result in a more enthusiastic entry next time.

Mr. Mills: I should like strongly to support that which Professor Gardner-Medwin said about the student organisations adding their comments to those that are sent in with regard to the future and the past of the R.I.B.A. prizes. Please take it seriously and send comments after you have given the matter serious consideration, because I think we can once more get the prizes to students back to the glory of the old days.

The President then presented the Medals and Prizes, and the meeting terminated.



J. C. H.

England, Architects and the Last Floorboard

by John H. Balmforth, A.R.A.I.A. [4]

A VISITOR TO ANY COUNTRY tends, of course, to be imprisoned behind an impenetrable glaze of special manners and to live according to values reserved hospitably for guests. Whilst this is gracious, it can preclude a true view.

In England, it can mean being energetically dragged down crooked streets to look at buildings distinguished solely by age and a casual mention in Dickens, being leniently treated for parking offences in London and, at dinners and cocktail parties, learning to avoid those good-hearted people who assume automatically that one is homesick and tell one how much they know of one's own country, which they visited for two days on a world cruise in 1932.

My casual comments here are made from the vantage-point of sinking into the general scene and taking part in the jostle-and-push living life of England. I have worked in our profession, talked, watched, listened and played. I have not examined carefully, nor travelled much in England. My judgments are loose; I cannot and do not attempt to make statements which are irrefutable, or observations which are completely informed. My remarks, in fact, have only the validity of being an average-enough visitor; the picture my eyes have seen in a country I have long thought of affectionately as a second home.

Britain, even after two decades of trouble and recovery in a changing world, still retains that recognisable quality of national individuality. After a European city, there is the sensation of a well-ordered solidity, an assurance that everything is going along as it should. Also, that no process or institution is so big or complex that it cannot admit personal right and individuality. On the surface of things, individuality is respected to the point of eccentricity; if one wishes to dress like Sherlock Holmes or have a shade fitted to a flashing beacon which disturbs one's sleep, one can. Yet, in architecture, aesthetic controls to varying degrees are exercised. And, what is more puzzling at first sight, the general public accepts such controls as, by and large, good legislation.

I have been told (but cannot vouch for the authenticity) of instances where buildings have been grossly mis-oriented to suit the ruling of a control authority, where perfectly logical elevations have suffered the introduction of false emphasis to 'harmonise' with adjoining Georgian façades. Our methods of land division and ownership create problems of co-ordination, problems which should be carefully balanced during the process of design; I was at first astonished that these problems were taken out of the architect's hands, that freedom to determine the shape and form of things was, if not entirely a thing of the past, severely restricted.

It is a strongly debated question. The architect's point of view is commonly that he is the only person qualified to make aesthetic rulings, that he is best trained in the community to do so. The intelligent public are, I have found, not so certain on this point; they concede that the architect is the person who *should* determine the shape of things around us, but are not so willing to agree his competence to do so. Partly, this attitude may be due to the British impulse to keep authority away from organised groups—an aesthetic dictatorship by architects would be repugnant to most people—with the added idea that the opposition of two groups will temper irresponsible radicalism with a broader sagacity. This, after all, is the principle of government that is the foundation of our society.

This spirit of compromise may be an effective technique in government, but I judge it to be fatal in art. So do most informed and cultured people, yet they are still unwilling to give the architect a free hand to look after the aesthetic environment. I will not draw any conclusion from this point, but will go on to comment on other observations which I think point in the same direction.

A strong impression in England is the widespread dislike for consumer-goods made by modern techniques. A very large proportion of homes are equipped with machine-made reproduction furniture, gilded and ornamented clocks, light-fittings with runs of imitation candle-wax dripping from the electric globe. In buildings (which, after all, are merely another form of consumer-product), the tendency manifests itself in a widespread devotion to the Regency.

It is commonly said by professional designers in all fields that the taste of the average English consumer is deplorable, that 'giving the public what it wants' is therefore an act of prostitution, a resignation of all idealism and good taste. That it is necessary to 'give the public what it wants' in order to sell the article one designs is thought to be very regrettable. It is my belief from observation that, far from having a deplorable taste, the main levels of the consuming public have an ultra-fastidious one. They expect more than the designer can provide. They inherit a long history of good design and craft and, I believe, have no delusions about the falsity of the article they buy and the dishonesty of its expression. Why then do they buy it? Perhaps the answer is the quite simple one that they find something in the 'bad' article which they do not find in the 'good' article and that this something is not on the level of the function and technical expression of the product, but on the level of the emotions.

This suggestion may seem unlikely to the designer, but we must remember that we are so clogged by our own professional viewpoint that the reactions of the public we serve can elude us. We can even forget that design, by its very nature, is the perfect expression of the technologies. It is measured by the yardstick of man, albeit often indirectly, and is limited only by the needs of man. I do not say categorically that the appeal of 'bad' products is emotive in character—although it does seem likely—but there is some need which these products satisfy and which 'good' products do not satisfy.

Generally speaking, it is not for the designer to distinguish and discriminate between the needs he considers 'legitimate' or otherwise; if modern life is cold, sterile, regimented, insecure and de-humanised by virtue of world politics and scientific progress to such an extent that the need for counterbalancing values is evident in a householder's purchase of a clock or mirror, then it is the designer's task to hunt and catch this need, to examine it, to understand it, and finally to give it a perfect corporeal expression in the article he creates. That he can do so is undeniable. He can give sound and honest technical expression to his design as well as satisfying functional needs at all levels. The much-misused expression 'modern design' means nothing more than design which has at its command the totality of techniques, knowledge and materials developed up to that time. As such, it is merely a larger vocabulary for producing satisfactions. There are, of course, restrictions to the use of many of these techniques and materials—some are uneconomic, some have been superseded by better techniques, some are possible to do only in repetition production. Our mistakes in design have been the wholly understandable ones of respecting the character of our machines more than the character of our people. And even if man himself is a machine, he is a much more ingenious one than an automatic lathe or an electronic computer and merits this study. Design on these terms involves no sacrifice of honest expression, no distortion of logic; far from it, it demands an even higher degree of skill from the designer. The possibilities are boundless.

The same comments can apply, almost in full, to architecture in England. Here we have the great challenge of a discriminating public, rubbing shoulders daily with the great architecture of the past. This is a challenge which the newer countries lack—their public tastes are satisfied by buildings which create precedents for the future to better—whereas England has, in daily use, buildings that are oft-times almost perfect expressions of their age and the extent of

knowledge available at the time. That 'modern architecture' has so few patrons in England is commonly blamed on reactionary elements, the love of 'tradition' and general inertia; to some extent, no doubt this is true. But it is also a fair indication that 'modern architecture' (and consequently 'modern' architects) fails to satisfy the needs and longings of people in all ways and at all levels. I have found that most people in England are perfectly willing to concede the good sense of planning buildings the right way round, of not crimping things up in an illogical manner to fit behind some preconceived façade and all the other principles which the 'modern' architect considers axiomatic. I have yet to meet objections to the more convenient enclosure of space by flexible modern means. It is on the levels of emotional reactions—or lack of them—that the objection is met; the buildings we build do not touch the heart. We slip into and out of lifts the more conveniently. We do not become tangled with tea-trolleys in constricted corridors. We are well guided within these enclosures by a logical organisation of space and adequate signs. But we experience nothing more rewarding than we feel when the water cistern correctly flushes.

There are secondary effects, too. We get the criticism that 'modern' buildings are not sound and solid—where are the stone walls, feet thick?—but I do not believe these criticisms are any more than an attempt to decry structures which are unsatisfactory to the public for other reasons. Notwithstanding the buildings of the past, I have found little objection to the idea that most modern buildings are destined for a shorter life than St. Paul's, that the world is changing so rapidly that an expendable building is potentially less of an embarrassment than a building designed to last four hundred years. It is a sign of a changing world and people are quite confident that the British way of life will persist and survive through change for as long as Britain itself persists and survives; it does not need to be loaded up with antiquated buildings.

Readers may wonder why I have put the words 'modern architecture' in quote marks. This is purely a personal preference; I dislike the term 'modern architecture' for it seems to signify some difference in kind with 'architecture'. It puts a division in the public mind (and perhaps also in the minds of many architects) where no true division exists. My view is simple; to me, the word 'modern' applied to architecture means nothing more than it does when applied to, say, motor cars or war. 'Modern architecture', therefore, means the architecture of the present time—the buildings produced today in satisfaction of today's needs and utilising the accumulated body of technique which is available to us. As such, it is a difference in degree, but not in kind, from the architectures of yesterday and I think it would improve public relations considerably if the term were dropped.

I have given two observations above—the unwillingness of the public to put

matters of aesthetics entirely in the hands of free architecture, and the unhappy frame of mind of the public about 'modern' products and buildings—and I believe both of these states of affairs point to a public lack of confidence in professional designers. In England, the public is seldom enthralled by what is produced today; were people enthralled they would not hesitate in giving complete freedom and support to their designers. I have suggested where this dissatisfaction may be—on the emotive level—and my own reaction to modern British architecture has borne this out. I have looked no further than the average citizen looks in going about his life, but I have yet to see in Britain a modern building which attempts anything more than logic and a decent reserve of statement. In one or two instances I have seen not highly successful attempts in décor to produce an emotional response through the senses. As a professional architect, I can fully appreciate the logic and technical skills involved—this degree of appreciation, we should remember, is not available to the public without lengthy explanation—but, putting oneself in the mental frame of the commuter from Kent hurrying from Charing Cross or the stockbroker strolling with his luncheon guest through a November mist in the City, there is little else to find.

Let me be quite clear on one point: when speaking of an appeal to the emotions, I mean something quite different from the emotional relationship one may have with something with which one is very familiar. Many buildings, having no claim to merit other than having stood in the same place for a lifetime, are distinguished in this way. It is fortunate and not to be derided that this can come about—it is rather like what one may feel about the barber who has cut one's hair for twenty years. I am speaking of the positive emotional reaction which catches at the heart and continues to do so through the years; something that draws part of oneself into active response and, to greater or lesser degrees, welds one into some kind of unity with the stimulus. These are the buildings one wants to *go into*, to be *part of*, to unify oneself with, to be absorbed into and to absorb.

Also, let me be quite clear that I do not expect works of art at every street corner, for I do not. That is too much to expect. We must accept the fact without misgivings that the main mass of buildings will be designed by competent, honest architects who, to a large extent, practise architecture as a highly-skilled trade; their function is inherently a negative one, but they prevent conscious ugliness, dishonesty and bad planning. This is not to say that oft-times buildings of considerable artistic significance are not produced out of this climate. That tendency is present, to a greater or lesser degree, in every person graced by the description of 'architect'. It is simply a case that the virtuoso is rare and the way to art a long one, the obstacles many.

Earlier in these notes I wrote about the strength of British national individuality, the distinguishable quality of English life. I do not use the term 'British' in the sense

of caricature, as it is amusing for Americans to use it, but to describe the aggregation of reactions to contemporary life, the British evaluation of contemporary opportunities and possibilities. Britain is a living organism in the world, subject to the pressures and influences of both national and international change. Many things are taken into the British way of life by being swallowed whole—on a light plane, the Espresso coffee shop is a good example—but the majority of new things are tempered, adapted or modified to suit the British scene. Commonly, this process of adaption so modifies the original conception that the basic point is lost; this fact could be taken to mean that the original conception was not suitable for use in Britain in the first place. In many instances, this is no doubt true. In more severe matters, there is no free choice and the change has the weight of inevitability. In much the same way as we recognise that jet aircraft are more useful than cavalry in fighting modern war, so we must concede that machine production is inevitable in a modern world. There is no alternative but to accept the fact and set about adapting machines to British ends. Similarly, we must utilise the products of our machines to British ends and architecture is one of the major channels for this process.

There is a popular modern opinion that design is so influenced by the internationality of machine products that differences in human tendency—whether individual, regional or national in scale—must be submerged in the logic of assembling the materials. The viewpoint runs that an architect in Peking or Montreal must, by working with essentially the same materials and the same knowledge as an architect in Fleetwood, produce essentially the same building. Machine production, processed materials and prefabrication techniques are certainly levellers of individual expression; it is only in very backward countries (I use the word 'backward' in its purely Western sense) such as parts of the Middle East, parts of Polynesia and parts of Africa, that the extreme individualism of regions and races can be fully expressed. The situation is analogous to the written languages. The European languages share the same alphabet to a large extent, yet are vastly individual to their particular nations and to regions within those nations; this situation is similar to the position of industrialised countries in regard to materials. The relationship between the materials of non-industrialised countries and those of the above group is roughly analogous to the Arabic script and the European alphabet.

In other words, machines produce an international alphabet or vocabulary of materials. This is far from an international language at the present time; we still have the opportunity to assemble our materials (or letters and words, as it were) to say an individual thing. It is possible that the future may produce an international *language* of materials—that is a development which, should it seem undesirable on the

evidence of future sociological knowledge, may well be forestalled—but it has not done so in the future that is now our past. We are not yet submerged by the machine and I am surprised to realise that this view is seriously held by architects of world renown.

My suggestion that worthwhile individual expression can be made with the international vocabulary of machine production should not be taken to imply a necessary (individual) conviction on my part that a society founded on the principle of individuality is necessarily the most efficient social organisation, nor the type best suited to push our little world on to glory. Such questions have no place in these notes. In England, individuality, both personal, regional and also national, is the footing of all values. Privacy and individual liberty are corollaries; these values, although a little muddled in the post-war England, seem as inherent to English life as fog is to the Thames. This view, quite naturally, is dispersed to the world at large. 'Diversity is the *sine qua non* of human achievement' might be the expression of the pompous or erudite; 'It takes all sorts to make a world' is the style of the East End public-house.

In view of this respect for personal and national individuality, it is surprising indeed not to find in England a full-bodied reaction to this new world of new materials and new understandings. There is no doubt that the inevitability of machine production is recognised and accepted, albeit rather regretfully. In England, the passage of time itself—the endless rushing of the future to become the present and the present to become the past—is regretted and accepted only with resignation. The splendid consistent inconsistencies of the English attitude seem as alive as ever; the average Englishman regrets that the mass-leveller of the B.B.C. has driven the Cornish language into extinction, but, nevertheless, fully expects the French to speak English. One would think that singular values of this nature, expressed through British architects, would evaluate and give distinctive adaptations of the new and necessary techniques in building. I have seen no such thing. There seems little attempt to use this smooth and highly-efficient modern vocabulary to say a British thing. The England I have seen is dressed in disguise, wearing a rag-bag of architectural clothes borrowed indiscriminately from the International Shop. At best, I have seen a few minor forms brought about by adaption of borrowed techniques to out-dated building laws, a few clichés, an attempt to fiddle with scale and detail (the interior of the Festival Hall is a good example of this); it seems to be all an embarrassed coughing, a shifting of feet.

I humbly submit that the conditions I have described—from public unconfidence in the professional designer to the lack of a virile interpretation of the present day—are symptomatic of illness in the profession of architecture and associated professions. This submission is a little unfair because in

some instances the illness may stem from economic and other causes on a national level.

Without transgressing the limits of what is within the control of the profession, I can set down what I believe to be weakening factors. Reflection on these points may be fruitful.

One major cause of weakness is, in my opinion, the form of contract which places primary importance on the Bills of Quantities. I do not for a moment suggest that the majority of practice takes advantage of this situation, but I do suggest that the opportunity to pass decisions to the quantity surveyor is ever present—and, to some, perhaps ever tempting. It is an opportunity for the architect to lose control of the work, to have decisions made for him. It would be illuminating, I should think, if some kind of survey could be done to determine to what extent the quantity surveyor is commonly in possession of all the information he requires before he begins to measure. The surveyor's practice of sending out query lists seems to indicate a certain scepticism on his part. I should imagine that, after the lists are returned once or twice with inadequate information, the surveyor is inclined to make the architect's decisions for him, to work by his knowledge of the architect's previous work. This seems especially likely when he is being pressed for completion of his documents. It can be argued that this possibility is within control of the individual architect; that he will lose control of his design only if he is willing to do so. This, of course, is perfectly true, but I think it unrealistic to expect professional men to be more than human, especially when harried in the hot and dusty world of practice. It is a factor which tends to weaken the standard of design; if for no other reason than that, I believe the loophole should be closed.

There are many points in British architectural education which, in my opinion, require review and which, I gather from reading and correspondence, are being reviewed. One of the points which have puzzled me as a visitor is what I call the 'master builder tradition' in education. By this expression I mean the preoccupation, which I find so evident, with bricks and mortar, the fabric of buildings themselves. The English architect may think this a very strange attitude to adopt; he may be inclined to say: Well, after all, we are the designers of buildings, the skilled advisers of the public in the matter of buildings and the administrators of building contracts—it would seem that we must be concerned with the fabric of buildings, the plaster, bricks, damp courses and plumbing pipes.

It is true that buildings are our end-product, our *raison d'être*. I do not suggest that we are living in some kind of paradise where architecture can be practised without finally resulting in a building. Such a situation is quite conceivable, but it might involve a kind of ingrown hobbyism, an aimless wandering divorced from the living reality of need, an academism in

vacuum; and it would certainly not pay a fee to keep the children fed. The English emphasis on teaching bricks is, in my view, a left-over from the days when building materials and techniques were simple and few—the uncomplicated days before the advent of applied science. It suggests to me that the full range of modern materials and techniques are being disregarded and that training in the master-builder tradition is only possible by virtue of this attitude. I recall picking up a student's notebook and reading over a page of notes about the technique by which the last tongued and grooved floorboard is laid in a section of floor. (I read it with interest, too, because I hadn't previously thought about the point nor come across it in practice.) It seemed to me at the time that this page of notes might have been better taken up with some broad understanding of, say, plastics, synthetic resin adhesives and paints, the amortisation of die-costs or modern building sequences.

Let me be quite clear on this point; I do not suggest that knowing about the last floorboard is a useless piece of mental lumber to carry around—I am sure that the students of that class have found it quite handy. For my part, having spent many years acquiring some measure of hand skill in many of the building trades, I can hardly decry it. The point I make is that, with such a vast body of building science to sieve and digest in the course of a few years, we can only find time to teach the most fruitful understandings. In a five- or six-year period, it is not possible to make *modern* master masons; it is almost impossible to lay the basic understandings which permit the student to learn throughout the rest of his life. To teach too much about the last floorboard involves cost to these fruitful understandings, and that cost far exceeds the usefulness of the fact. In short, it seems essential to re-cast out-moded courses into forms suitable for the present day; the alternative is to inherit all the bad things of the present day and none of the good things which compensate for the bad.

There are other alternatives to re-casting architectural courses. One is to double the length of the course, making the road a longer one to hoe. In this way, a greater degree of understanding can be achieved. This proposal has ramifications on an economic level—can we afford to keep students cloistered for ten years?—will it reduce the production of qualified students? These points are well beyond the scope of my notes. The second alternative is the one which society expects and, for right or wrong, tends to accept as an inevitable consequence in modern life; this alternative is specialisation. In architecture, the most common proposal for specialisation is that the skills and understandings necessary to give a building corporeal form should be separated from those concerned with evolving the form. Almost certainly, there must be many sub-specialties within the first group, which we might call the technological group. If architecture is to accept

the challenge of modern life to the full, there must be sub-specialties in the second group too—this group might be called the 'co-ordinators' or, better still, the 'creative element'. When specialisation is discussed, I have found that often the discussion devolves to giving names to the various elements and that the point is lost. I do not propose to mention which group, or whether both, should inherit the appellation 'architect'. It is an honourable title, but the point is unimportant; whether or not architects continue into the future is uncertain, but architecture certainly will. The need of shelter and enclosure extends into the future; it follows that some agency is necessary to bring architecture into existence. This agency—the form it takes, whether collected into a single dictator, dispersed into the hands of individuals to such a degree that 'tradition' itself seems the only true name—has changed in history, is changing and will change further in the future. Should such a division as I have described come about—or, better still, should it be anticipated and set up as an artifact—there will obviously need to be an overlap, a mutual understanding, of the skills involved. It would be otherwise impossible for either to act effectively. That point is axiomatic and is nothing new, for we have it today and it is developing every day. It is very indicative of the current professional viewpoint in England to put up this division of skills; I have done so, in rather an extremist manner, many times—purely to absorb reactions. I have been astonished to find this repeated reaction: If the profession did divide in the way you suggest, the 'technological group' would have a full job to do, but the 'creative element' could only be lax and idle. It would not be a full job; we would have time on our hands.

Far from having time on their hands, the creative element would have the opportunity in casting aside the nuts-and-bolts part of their work to enter in to a new, wider world. Every architect, particularly those in commercial and industrial practice, must realise that today new factors are being thrust upon him, factors which the architect knows all too little about. Time and motion study, public relations, industrial and social psychology, economics, investment analysis are but a few. These professions are producing results and their skills must, insofar that they affect the design of buildings, come to the architect for evaluation and co-ordination. The days when an architect could design a warehouse without leaving his ivory tower are drawing to a close. Nowadays, he is surprised to find that a warehouse is not merely a large, vacuous space—four walls, a floor and a roof. It has become an enclosure where 'materials handling' is carried on; highly specialised machines, techniques and procedures are involved. In short, it has become a more specialised vacuous space, requiring a greater degree of understanding. Modern man—in fact, man from his earliest time—is committed to an ever-growing consciousness.

These factors will become increasingly

relevant to the design of buildings. Knowledge will not rest until it is applied, regrettable as some of the social consequences of this urge may be. It is from being browbeaten by the new researchers that the architect today, loaded down by his threefold task of designer-technologist-administrator and perhaps unwilling anyway to widen his sphere of reference, falls into a passive attitude. He tends to act as a post office, channelling the comments and contributions of specialists in whatever direction, or to whom, he thinks they should go. The need for active leadership and evaluation must be satisfied. If it is not done by the architect, as a conscious part of his function, it will be done by some other agency. All too often, this agency is the muffled, anonymous, memo-writing wheels of the client's industry itself, the final resolution and evaluation being issued to the architect in the form of a nice, crisp instruction which his training fits him to understand: We enclose our drawing showing the layout of the such-and-such. Please incorporate this into the scheme.

The architect today is becoming more and more, a mere actuary who takes 'his client's instructions' in the most literal sense. A few vigorous souls, either having inordinate personal confidence or rare common sense, take a more positive attitude and maintain some kind of active leadership—whether or not for the best is hardly ever known. There is no doubt another group which manage to maintain leadership—they are the not-quite-proper people who rebel against being dictated to and carry on some kind of clandestine, under-the-bedclothes study of other men's worlds which they evaluate as being important. Their bookshelves reveal an infernal curiosity on such matters as automation, sociological experiments, identification by colour symbols, properties of plastics—matters which cannot have the slightest bearing on architecture—and evidently they wish to sieve these subjects so as to be left with the essential core of understanding, the nature and value of the particular contribution. In some previous age, no doubt such people were burnt at the stake, charged with heretical practices.

I have met in England an architect who can design his own roof trusses. This, I thought, a very amusing quirk of ability, rather like being able to wiggle one's ears or juggle three oranges; at the time, I recall trying to cap it by remarking that I could sharpen saws, an activity in much the same spirit, until I realised that he quite seriously regarded his ability as proper to the functions of an architect. Let me be quite clear about this, too; I have no objection to an architect being able to design his own roof trusses. It is highly commendable and I often wish that I had time to look into Bow's *Notation* again. If I had limitless time and my mind was a room of infinite dimensions, I would also like to be a veterinary surgeon, a histologist, and inquirer into the unbalanced G-field theory, a student of

transonic compression effects, a naval architect, an astronomer, a novelist, a student of Polynesian music and a thoroughly educated man—as well as a whole host of other things. As I have not limitless time, I can, by digesting the structural principles of roof trusses and retaining the residue for reference and future use, leave myself free to derive a similar understanding of, say, three-dimensional articulated structures and Nervi's work in concrete, or to think constructively about the utilisation of solar energy, warped surfaces and the optimum use of tensile materials. Were I to concentrate so much of my resources on a single aspect of my profession, I should feel afraid lest my intimate acquaintanceship biased my judgment and rather like a foreigner who interlards his sentences with ejaculations of 'By Golly' because it is the only colloquial English expression he really knows. My point is simply that education in the 'master builder tradition' is today impossible to have, unless at the expense of limiting the scope of the course. It is, in my opinion, much wiser to set the scope of education for architecture at the limits of the presently-known and, by imaginative and skilled teaching, get across to the student at least the general savour and characteristics of the subjects. As we must decide between one and the other, these understandings will be of far more benefit to him, and to society through him, than do-it-yourself roof truss design or a blow-by-blow description of how the last floor-board is placed. There are modern, efficient methods of teaching which assist in giving detailed, clear understandings in less time, but I believe (from talking to comparatively recent graduates of different schools) that these techniques are not utilised to the full. I am thinking of the cinema film, the cinematic cartoon, the techniques of ultra-fast and ultra-slow motion photography, the tape recorder and so on. One pettifogging reason given for this in a discussion with British architects was the expense. My suggestion was that the schools should not buy so many T-squares, for instrument drawing is grossly overtaught. The central agency for visual architectural education should be the professional body itself. To my viewpoint, it would seem that the profession cannot afford not to take advantage of every advance.

The relationship of client and architect should, in my opinion, be taught to a greater extent in English schools, as in schools abroad. It is practically an unteachable subject if the basic ability is not there, but then, so is design. Two methods of efficiently teaching the subject, not to my personal knowledge yet used in any school, are the recording of actual architect-client discussions which the tutors have in their practices (properly handled, the ethical objection is slight) and the establishment of 'clinic offices' in which students can carry on the actual practice of architecture for non-paying small clients who would otherwise not commission architects for their work. This 'clinic practice' could be

carried on under the guidance and control of lecturers, rather after the manner of medical internship and student-teaching, and would embrace all aspects of practice, including design, preparation of contract documents, contract administration, expert witness functions and all else that comes in the door.

In England, largely due to economic factors outside the scope of my notes, the young qualified architect has little chance of ever practising the profession in his own right, a deplorable situation in a profession so inherently personal and one which must lose Britain an inheritance of ability. It was this fact which inspired a very sage and resigned comment of an English architect with whom I discussed architectural education. 'In this country,' he said, 'we do not need to train architects. We train architectural assistants, for that is what they shall forever remain.' If this is in fact the case, as my own observations seem to bear out, then I would suggest that these people be more properly trained for that function and, out of kindness, should not have the creative streak in them encouraged by the schools. It would also seem wise to distinguish their function in architecture by a different name. If, on the other hand, we do set out to train architects, able, however shakily, to practise their craft (if necessary, immediately after qualification), then the 'clinic offices' mentioned above seem additionally desirable to counteract the limited range of experience available in actual professional practices. I have myself observed young architects doing nothing except bar-bending schedules and joinery details for periods of years and architects of forty years who have never designed a building in their own right.

There are two side-effects to the lack of opportunity in England, both determinants in the course of English architecture. One is that few architects have the opportunity to design anything until they reach mature years and, by this time, have become so deadened and uninspiring that they have failed to keep up with the rapidly-changing world. The result is usually that they approach their new responsibility to design with little confidence, or an altogether spurious confidence. That the design of much building emanates from this climate may be one explanation of the curious lack of enterprise in current British architecture, a paradox mentioned earlier in these notes. The other effect is that the few modern buildings one sees in England are, of course, designed by the younger architects or the young-in-outlook architect of any age. The tragedy of many of these buildings, at least the ones I have seen, is that they are commonly badly detailed and fall quickly into disrepair. Weathering not only softens and mellows, but searches out the weaknesses and untruths in construction. Soon, they become 'tatty' and uncomfortable to look at; the public therefore reasons that all modern buildings are 'jerry built', that the old ways are

better. This is a direct result of inexperience, which itself is forgivable—it so happens that in England the sword of 'modern architecture' is carried almost exclusively by the young, and the young are inexperienced. Hence, 'modern architecture' inherits the errors of inexperience, whilst yesterday's forms do not. This is particularly tragic in the new architecture, where so many problems are without precedent and therefore need even more the experience of maturer years.

This public reaction to buildings which are badly put together is not an unreasonable one, of course, but the general attitude to quality of craftsmanship in Britain seems, to the visitor, almost carried to the extent of a fetish. It seems that the viewpoint carries a corollary: a building having a long and laborious gestation is better built than anything erected by a quicker technique. Another corollary; the heavier the building, the better it is built. Lifted slabs, curtain walls and wire twitch fixings arouse great suspicion in the public mind. So does visible steelwork in a completed structure; there is a great fear of rust in Britain. These attitudes are not surprising when one recalls the great British craft of the past, but rather regrettable when they incline to arrest the great British craft of the present. The point can be best illustrated through building equipment. Recently, I had the pleasure of spending two months of the summer visiting London in search of hospital equipment; during this time, I had the opportunity to tap the reactions of British manufacturers to the complaints about archaism in industrial design which the Americans are fond of making. Why must a hospital bed look like something from the bedroom scene in a mid-Victorian melodrama? Why must a bedpan washer look as though it were made in the jungle from motor car spare parts? Why must pressure gauges, steam traps, four different shapes of handwheel and other impedimenta poke out in all directions? These questions stimulated sufficient reaction to get a true reading of attitudes. The first reaction, the primary reaction, was: British-built equipment works better than anybody else's make. The example of the Rolls Royce 'Merlin' engine (and its American copy) was cited and from there I was given examples of escalators which didn't work after the substitution of foreign parts, autoclaves which had functioned in the wilds of Borneo for thirty years without attention, and so on, until I begged for a pause. Defence of untidy form on the grounds that the article works well is no defence at all. I once had a radio receiver consisting of an aluminium chassis supported on four beer pewters which worked splendidly in a static location. British aeroplanes work very well and are perhaps the best-looking in the world. We expect all mechanical equipment to work, and can be righteously indignant if it doesn't; we particularly expect this of reputable British equipment, where the reputation for faithful craft is proud. I should be very resentful if I pressed the

self-starter of a Bentley which had been standing in the snow for six weeks and it failed to start without hesitation, unlikely as the chances were. But we must go further than that; we know Britain can make things which work well and wait for Britain to take the next step, and make things which both work well and look well.

The untidiness of British equipment design is not inherent in ensuring continued performance. It is simply the careless expression of engineers who are not concerned by appearances. Industrial designers working in close conjunction with the specialised engineers will win wider markets for British goods. The Vickers Viscount has been sold on the American market—the merit of the product at all levels has won this singular success. The British tradition of craft must now take the next logical step towards refinement of appearance and, in doing so, assuage the disconcerting suspicion in the minds of the world consumer that oft-times, due to some ghastly mistake, the British manufacturer has put the prototype or laboratory model into production.

The architect in England often tends to follow, rather than lead, the building industry. In doing so he can perpetuate thoughtless practice. One example of this must suffice: I recall examining the drawings of a building having a steel-trussed roof construction. The truss spans varied by inches, due entirely to a juggling of dimensions more proper to the planning of a non-grid building. I commented that rationalising the spans to a standard would not affect the planning at all but would yield economies of standardisation, less setting-out and jiggling costs, less overheads, etc. The point was not taken and I was informed that standardisation would not reduce the price, as all steel fabricators in Britain were priced by weight. I doubt if this is true, but, were it so, the fault is with the architect and engineer. If commerce is allowed to realise the economy of standardisation—if they are given more repetition work to do—they will soon begin to price by man-hours and the economy will pass to the consumer in a competitive market. The same is true in pioneering new forms of construction; the architect must slowly lead the industry to develop assurance about the technique. He must not excuse himself from this leadership by saying that new techniques are priced high; he alone can assess the ultimate value of the method.

I have been able to cover the main points of my observations, and very sketchily at that, but one final matter worthy of observation I must add. I know little of the difficulties of practice in England, but I have observed the pauper's life of the assistant architect on a salary. I have not had the opportunity of examining the detailed workings of more than two or three practices and these may have been untypical examples. Nevertheless, I can only remark on what I have seen. In all instances, I have found staffs and methods somewhat inefficient and rather idle. In

Housing Layout in Denmark

by A. E. Weddle [4]

As Hunt Bursar, 1957, Mr. Weddle visited Denmark to see examples of Civic Design. These extracts from his report deal in particular with housing in Copenhagen and other cities.

DENMARK does possess legislation providing a simple planning framework to guide development in towns. The problem of achieving a reasonable balance between local initiative and centralised direction in an essentially democratic country seems to have been solved, and solved in a way which encourages creative town design. Of particular note are the well-known 'finger plan' for Copenhagen and the plan for Greater Aarhus. In both cases there is a regional approach which recognises the real extent and influence of the city. It is notable that in Denmark there is a comprehensive grasp of design problems, a recognition that problems cannot be tackled in isolation. It is difficult for example to examine architecture, town planning or landscape design without being conscious of the very close interrelationship between these three aspects of town design. The attempt to examine one aspect in isolation reveals very clearly that to concentrate means ignoring or deliberately discarding evidence of a wealth of influences, consideration of which is essential for complete understanding. Their fine architecture seems to fit into a bold and imaginative town planning framework and landscape design is almost universally accepted. There is a landscape architect for most building projects, and any plans for a housing scheme for example must have a landscape architect as well as an architect and engineer before they will be considered by the Housing Ministry.

Not only are the buildings well designed, but also the spaces between them. The town squares, the courtyards and gardens around public buildings and schools are all carefully laid out and not just as a frame or setting for the single building, but as an integral part of the town scene. And running out of the towns too the design of new motorways has reached the point that from the very first stage of route selection and alignment, engineering earthworks and grading, down to paving and planting details the design is thought of as one to provide speedy and pleasant road travel, with the engineering aspects only one part of the problem. These matters have been mentioned briefly to give a general idea of the background of town design in Denmark, before going on to examine one particular aspect—housing. And before discussing the technical aspects of housing in any country it is essential to know something of methods of financing and administration.

HOUSING FINANCE AND ADMINISTRATION

During the industrial revolution era the private enterprise housing doctrine naturally prevailed. It was shaken a little at times, particularly during the First World War, and in the economic crisis years of the 'thirties showed obvious weaknesses. It was just not a business proposition to provide low cost housing for a large section of the community.

Following a cholera epidemic in Copenhagen in 1853 it had become necessary to move people out from the crowded and insanitary city centre. With funds collected during the epidemic the Medical Association set up a building society and built outside of the city. In 1851 a private enterprise credit association was established, providing funds to construct rented housing. In 1866 a group of shipyard workers set up a cooperative housing society and soon got some state loan assistance. Early in this century there was a serious slump in building activity. It began through financing difficulties in 1907 and after long unemployment among the building trades despite a growing housing shortage, a new workers' profit-sharing housing society was formed to stimulate building activity. The First World War brought difficulties, and the housing societies produced only a small proportion of all housing, but the idea was established and after the Second World War came the real expansion, and now the building societies are responsible for about half of the total production of housing.

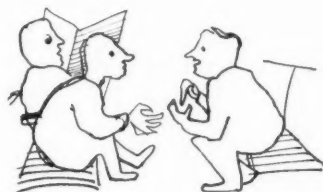
The building societies, or more accurately housing associations, show many advantages when compared with other forms of building activity. Socially they serve needs not readily met by private enterprise—providing houses to rent at prices within the reach of the bulk of the population. From the national investment point of view their activities assist in maintaining steady production to the benefit of the building industry and the economy as a whole. They tend to operate on a fairly large scale, planning large residential areas. This scale of development can give good site planning, varied housing types, and include special housing for the disabled, old persons and large families. (There are subsidies for special housing of this kind.) There can also be provision for social and communal activities, kindergartens, and shops all planned within the housing layout. They are much more successful in planning and providing these items than our average municipal housing authority. (Only a small proportion of housing is erected by state or municipality.) The housing association, with various kinds of financial help—including loans and subsidies—does carry out the duties which would have to be borne by

London particularly, I should imagine it is difficult to obtain premises suitable for efficient use, and this accounts, I am sure, for some measure of inefficiency. The main causes are, from my casual observations, vacillation in design, insufficient assumption or delegation of responsibility, insufficient planning of drafting programmes and a lack of single-mindedness in pursuit of the goal, losing sight of the objective, not having the complete confidence of the client, inadequate filing systems for drawings and typescript, a disinclination to provide sufficient capital for efficient equipment and—perhaps most important of all—the lack of a spirit of common purpose between principals and staff. I have found design programmes unnecessarily protracted and pre-contract work impossibly rushed; far too much correspondence being written and read; far too many unnecessary meetings and far too few necessary ones. I have observed practices unhappily crystallised to a size which permits neither personal participation by the principals at all levels nor the benefits of group working. I have never seen an office short of work nor one anxious over fees. I have seen much time lost through procedures with authorities and the rather haphazard land title system, and an inordinate amount through the somewhat unbusinesslike dealings of suppliers and commercial firms. I have observed decisive actions slowed down by inadequate telephone networks, and too many doors, steps and stairs.

I have never seen an even mildly-prosperous assistant architect and I wonder if more offices operated an incentive system what the effect on overall efficiency might be.

I realise that, in having made these comments on the basis of a very limited research, I may invoke a flood of angry protests and suggestions that I should look further before saying so much. Also, I have breached good manners as all bad guests do—I have criticised my hosts. It may be that the resentment arising out of my—admittedly—sometimes extreme comments may stimulate or hit home more effectively than euphemism and fatuous praise of the many good things and associations I have seen and enjoyed.

Perhaps some reader will send me a comprehensive list of things to see in Britain to correct my erroneous impressions. I hope so; I should like to be guided. I should like to be proved wrong.



the local authority if there was no organisation to provide for certain income groups. But the housing association is a combination of private and public enterprise and in Denmark appears to have the advantages of both. There is a lively interest maintained in new housing progress. Building societies compete for advanced design, employ the best private architects and foster a progressive attitude towards modern housing.

It is against this background that one should see post-war Danish housing; higher standards, better design, new materials, fine parkland settings, are constantly there. The dull jumble of the speculative builder and the all too often drab monotony and unkempt surroundings of council housing in this country are in marked contrast to the general high standard which prevails. And it must be insisted that the standard is both high and general. There is no question of a few special examples being fine. It is scarcely worth the trouble to pick out special housing layouts in suburban Copenhagen. Any drive round the suburbs will yield adequate examples. Probably the housing association is only one factor in the promotion of good design, but it is an important one. Standards of management are good and care is taken that the houses and their surroundings are well looked after.

The local authorities work in cooperation with the housing associations which in fact implement large sections of city development plans. A great deal of trouble is taken in a creative sense to provide the best planning framework. Much of the design may be provided by the municipal planning office itself (as at Aarhus) or in some cases there is a competition, for the layout of a site which several housing societies will develop.

Financial control through the Housing Ministry is used in a positive rather than any restrictive sense. High technical standards are encouraged, and there is no question of working to a bare legal minimum. Political pressure to lower standards has not been successful. It has been insisted that any reduction in costs must come through more efficient financing and by rationalisation of building techniques. A special quota of government loans is allocated to encourage experimental building, especially that using dry building techniques not requiring bricklayers and other craftsmen not available in large enough numbers.

Rents for this high standard of housing are correspondingly high. They are about double those prevailing before the war, but wages have risen about three times. Rent was at about a fifth of the skilled worker's income, and it is now at about a sixth. It is difficult to make comparisons, making due allowance for Danish and British subsidy arrangements, but both the real cost of housing and the net rent paid are higher in Denmark. House sizes are smaller, but the aim is for compact and efficient housing accommodation. Many women work—in Copenhagen 50 per cent of all married women have jobs outside the home—so they prefer to pay for efficiency

rather than size. The range of size receiving subsidies is 50–86 square metres, about 500 foot square to 850 foot square. Dwelling sizes used to be even smaller. In 1950 half of all existing flats were of two rooms only, but in that year three- and four-room types predominated in new building. The construction of two-room flats has dropped from the pre-war 50 per cent to a present 20 per cent of new housing.

HOUSING LAYOUT

For convenience of description housing types have been covered under three categories—low density housing, blocks of flats, and multi-storey housing. Low density housing includes the detached private house set in its own garden, various paired and terraced types of housing, and some two-storey flat development. Blocks of flats range generally from three to six storeys. Multi-storey housing covers the taller buildings, including point blocks, where the architect has chosen to go upwards rather than spread. It must be made clear that although questions of residential density do of course control the building type possible—the choice becoming more restricted as densities rise—the architect can choose in the middle density ranges and in Denmark he often chooses height. Thus multi-storey buildings, particularly tall point blocks do not always mean very high residential density. The point blocks at Bellahøj for example give a lower density than much conventional flat building in Aarhus. The character of layout of each type is quite distinctive—the arcadian small scale domesticity of the houses, the larger scale and the 'built up' sense of flat blocks, then the parkland sweeps among the high rise blocks. The distinction of character makes examination under separate headings necessary.

Low Density Housing

It is difficult to decide how much importance should be attached to the single private house in Denmark. It seems that in almost all cases it is architect designed but on average the design is little more advanced than that of large scale housing development undertaken by building societies. The architect wishing to attempt pioneer or experimental housing work seems to be encouraged rather than held back by these powerful organisations. There is thus less reason for attempting the architectural *tour de force* which may pave the way for a more progressive attitude towards design. And for purposes of illustration it is not possible to typify the modern private house in Denmark where designs range from traditional to international modern, although it is possible to detect a strong Danish idiom which makes use of the superb traditional brick-work and pantiles.

A particular feature of all single family housing is the carefully designed relationships between house and garden. A door from the living room opens on to a small terrace which is made to feel a natural extension of the living room, being given a

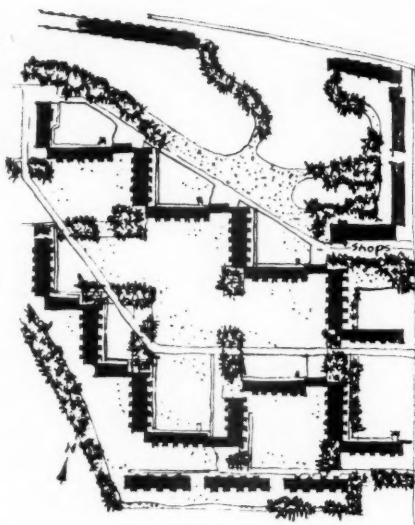
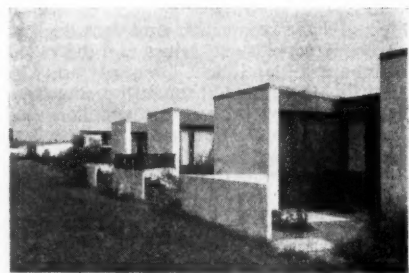


Fig. 1



Figs. 1 and 2. Housing layout at Skoleparken, Copenhagen. Scale 1:5,000. The single storey houses have small private terraces opening on to a large green. Architects, Bo and Hallberg. Landscape Architect, Langkilde

sense of enclosure and intimacy by the provision of a simple screen porch or pergola. Where housing layout is in terrace form the houses are seldom in a continuous strip but are usually staggered so that part of one gable wall flanks and screens the sitting out area of the adjoining house. This kind of staggering of individual houses also secures privacy for the entrance on the street frontage. Whereas the garden related to the living room is designed for enclosure and privacy and is very much part of the house, on the street frontage the garden or forecourt is open and belongs to the street rather than the house itself. Street paving details are well worked out and many small details like the formation of pavement crossings into garage drives which are individually of minor importance all contribute to a well designed and carefully worked out street scene. Sometimes groups of single family houses in terrace or detached form are designed to open on to a common garden. A particularly interesting example was seen at Aarhus, designed by T. Ry Andersen.

The outdoor living area is most fully developed where it is the only piece of private garden reserved for the individual house.

Sometimes these private gardens are very tiny in marked contrast to the generous provision of a common garden. There is contrast in both scale and character. The living area is tiny and sophisticated even where planting is informal and the common garden large and bold. At Skoleparken the area devoted to broad sweeps of grass and generous tree planting (mainly conifers) is carried to extremes and one wonders what are the tenants' wishes in this respect. In this layout the occupants of a group of a dozen or so houses had petitioned the building society to allow enclosure into individual gardens of the 50 or 60 ft. strip of common left behind their houses. But this may not be a typical reaction; the case was recounted by an English engineer who occupied one of the houses and his personal influence on Danish opinion cannot be disregarded. The idea of the common garden cannot here be objected to on grounds of privacy. Skilful design and planting of the forecourts and sitting out areas at Skoleparken do make them remarkably secluded. (Figs. 1 and 2.) But the garden commons do not achieve any social unity. In an investigation into conditions at Sondergaardsparken Professor

Stein Eiler Rasmussen reports¹ that students found the large green down the centre of the layout to be a social division and not a common meeting place for people living on either side of the green. Not even the children seemed to play here. (Fig. 3.)

Now that its planting has had a few years to mature Sondergaardsparken is one of the most attractive low density housing layouts in Copenhagen. There are two main types of housing. Rows of terrace houses are set at right angles to the estate road. They have footpath access to entrances on their north-east side on which are located kitchens and other ancillary rooms, and the main living rooms overlook their own small private gardens. (Fig. 4.) Elsewhere pairs of bungalows are again turned at right angles to the estate road and approached by a short cul-de-sac spur. (Fig. 5.) In this case gardens are very small but heavily planted to give seclusion whilst opening on to the large areas of common garden. A school building is located near the centre of the site and at one entrance there is a group of shops.

¹ *Neighbourhood Planning*, by S. E. Rasmussen. TOWN PLANNING REVIEW, Vol. XXVII, No. 4, Jan. 1957.

Small Shopping Centres

Small shopping centres grouped at the entrance to new housing areas are important features of residential layout in Copenhagen. The new shopping centre is provided to serve the newly housed population but by being prominently located at the entrance to the estate it has a service area extending over existing residential development. There is usually a skilful compromise between the traders' traditional preference for a location on a busy traffic way and the desire to provide a safer and more secluded shopping area. Many of the large housing layouts are of course built in several stages. It is customary in Denmark, however, to build the shops and all forms of community services at a very early stage to provide all the attractions which will ultimately be offered in the neighbourhood. This sometimes means that shops will not be working to full capacity for the first few years. Rents during this period are reduced accordingly.

The group of shops at the entrance to Sondergaardsparken is an excellent example of a small shopping centre in a residential area; it is visible from a main road, but few shops front on to it. (Fig. 6.) The main group encloses two sides of a small square opening off the estate road. A low screen

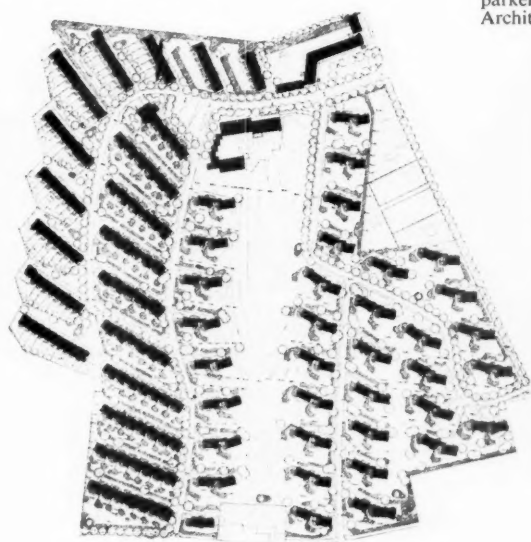


Fig. 3. Housing layout, Sondergaardsparken, Copenhagen. Scale 1: 5,000. Architects, Hoff and Windinge



Fig. 4. Footpath access terrace housing, Sondergaardsparken

Fig. 5. Pairs of single-storey houses with a short cul-de-sac access

Fig. 6. Shopping square, Sondergaardsparken



wall divides the paved area in front of the shops from this road and also forms an enclosure for café tables and chairs. Generous provision is made for cycle parking under a row of trees. In this early example little provision was made, however, for car parking near the shops (or for garaging near the houses). All the shops can be reached under the shelter of a covered way and summer shade is provided by trees. The whole of the shopping forecourt has been very carefully designed having well detailed items like concrete gratings at the base of each tree, lighting related to the scale and function of a pedestrian rather than a motorway, and neat advertising panels incorporated in individual cycle racks.

Another good example in Copenhagen is to be seen at Skoleparken. There is good economic location of shops at the entrance to the estate where they are also visible from the main road and readily accessible to those who do not live in the estate itself. As in the case of most recent layouts there is a generous car park near the shops. In this case there is also a pleasant garden with seats, formal paving and tree planting and well-stocked flower beds. The seats are screened from the car park and overlook the flower beds and a children's sand pit.

In Aarhus there seems to have been a curious survival of the traditional corner shop in planned housing layouts. This has survived until quite recently. Instead of being concentrated in a group several shops were distributed among flats, usually tucked in at the end of a block. More recent residential layouts show compact grouping of the shops. One interesting example was seen where shopping was concentrated into a two level block, with access from the estate direct to the upper level and from the main road to the lower. It was an ingenious way of taking advantage of changes of site levels but detailed architectural handling fell short of the imaginative planning conception and the commercial gain seemed doubtful with the lower level shops set too far back from the main road which in any case did not seem likely to develop as an attractive shopping street.

Blocks of Flats

It is possible to trace changes in the layout of housing, particularly the layout of blocks of flats, which have taken place in the last thirty or forty years. These changes are very well described by Esbjørn Hjørt in his book on Danish housing,¹ and in Copenhagen the progressive stages can be seen with remarkable clarity. The changes result from two things, firstly the method of financing housing and secondly acceptance of new designs. Originally urban development on small sites had inevitably resulted in continuous street forms with small rear courts. With state financing it became possible to develop whole street blocks enclosing courtyards now large enough to be laid out as gardens and recreation grounds. At first this green courtyard remained the

'back' of the building, being overlooked by kitchens, bathrooms etc. with the principle rooms kept on the street frontage, regardless of orientation. But the courtyards were so well landscaped that it became common to take advantage of the pleasant internal views and to turn the house plan around, especially where better sunlight as well as a fine view could be obtained. And there had also been a break from the full perimeter development of street blocks, one side very often being left open to allow good orientation for all flats. These developments took place during the 1920's and loosened up the traditional block from making way for a second stage of development during the 1930's. The second stage coincided with the arrival of modern architecture and functionalism. At first the German influence was important but working within their own financial and social framework Danish architects were soon able to develop their own layouts.

At this point it should be noted that the loosening up of building forms did not lead to any large scale abandonment of flat development. But the new flat blocks were much more pleasant than those which they replaced. In 1945 Copenhagen itself had about 227,000 flats and only 23,000 houses. According to Hjørt even suburban Gentofte north of the city in the same year had as many flats as houses. There was a trend towards separate villa development in some of the outer suburbs in the 'thirties, but large scale development after the Second World War returned to a high balance of flat building. In recent years considerable numbers of houses have been built but in each year their total has been a little below the number of flats built. There has been no major conflict of houses versus flats. Within towns flat accommodation has been accepted as standard, with houses reserved for the more outlying districts. Flat building has been favoured for economies of building cost as well as saving of land. In common with most continental countries (and contrary to British experience) the Danes find flats cheaper to build than houses. Flats are said to be 20 to 30 per cent cheaper, although sometimes this gap has been reduced. Residential densities, whilst much lower than those in the older parts of Copenhagen for example, remained moderately high, at about 150 to 200 persons per acre in inner zones, 100 to 120 in the intermediate zones and seldom dropping below 70 or 80 per acre even in outlying districts. There are many pitfalls in attempting to translate Danish residential densities for comparison with those in Britain or elsewhere. Their measurement of intensity of building development on a site is described as 'degree of utilisation'. This is in fact the same as the floor space index which we use for non-residential development in towns. Their flats are smaller and more compact than in Britain and occupancy ratios are higher, but do not approach those prevailing for example in Sweden.

The first developments in the 1930's were fairly large detached flat blocks stepped or staggered on the site to permit good daylighting to each block. But the rows of

parallel blocks were found to be monotonous in spite of the careful planting of the open parkland spaces which these arrangements gave, and excessive openness was found to be somewhat bleak and cold in the windy Danish climate. Various forms of angle arrangements were tried next to provide a certain amount of shelter, repetitive arrangements avoided and more advantage taken of existing natural features on the site. Rather than spread development uniformly over the site separate groups of flats were arranged leaving fairly large parkland areas. These ideas were well worked out in a large number of comprehensively developed sites. The architectural competition system was much favoured as a means of providing an overall framework for housing development particularly where different building societies each with their own architect would be developing only one part of the site. The competition provided the master plan for the whole neighbourhood.

In the successive stages of housing development just described landscape became increasingly important as an essential ingredient. The early courtyard would have been barren and unattractive without landscaping and so would have failed to influence the changes which eventually led to parkland layouts. Parkland layouts would not have succeeded without the design care and maintenance skill which has been employed to make them real and effective parkland which is now accepted as the normal and traditional setting for all housing other than in the very highest and lowest density ranges. Danish architecture tends to be very modest and extremely restrained in character and expression, and most housing layouts would be quite dull and unexciting without the skilful landscaping which they always receive. There is nothing theoretical about the integration of landscaping as part of the design. It is recognised as being an essential ingredient. There is always a landscape design scheme as part of each housing project, usually worked out from the earliest stages of design by close cooperation between architect and landscape architect. The normal capital amount allowed for landscaping is 3 Krone per square metre. This is roughly equivalent to £700 per acre—say £30 per dwelling in development at about 80 rooms per acre. This is more than twice the best one can expect in Britain and many times the average expenditure. The 3 Krone per square metre covers paths but not roads or major retaining walls. In the case of high density development where large areas of expensive pavings are needed it is accepted that high capital costs of up to 10 Krone per square metre are necessary. Annual maintenance costs vary between 0.4 Krone and 0.6 Krone per square metre. This is about £120 per acre, corresponding fairly closely to costs in some of our New Towns. It is important to note that although first costs are higher than ours this appears to keep maintenance within reasonable limits. In many cases the problem of maintaining landscape areas has been eased because nearly all new housing layouts have central

¹ *Housing in Denmark since 1930*, by Esbjørn Hjørt. Architectural Press, London, 1952.

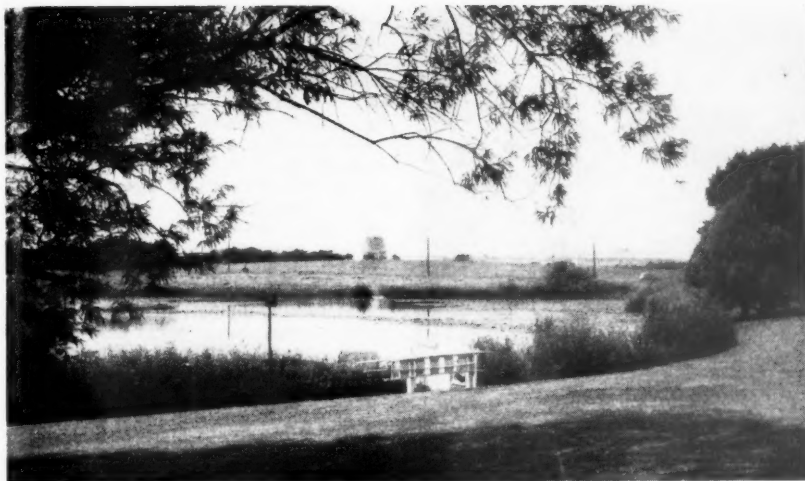


Fig. 7

architects have not been so heavily pressed on density requirements but they have still tended to group flats in large blocks on the perimeter of the site leaving the centre free and open, rather than occupy more of the site with smaller buildings. Aarhus in fact seems to show a pattern of progression in housing development following but lagging behind that of Copenhagen. The loosening up of the blocks in the 1920's is there but the parkland development of the 1930's is incomplete in pre-war examples. To the south of the central part of Aarhus can be picked out an abrupt line of change from the massive pre-war blocks to the more open forms of post-war housing. Design standards in Aarhus do seem to fall somewhat short of those prevailing in the capital city. It is difficult to understand why this should be so. The time lag is quite understandable but there is a certain sense of dullness, a lack of sparkle that is difficult to define. Housing development is planned in a comprehensive manner, most of the master plans being prepared and their implementation co-ordinated by the city planning office. The work is thorough, well worked out and competent, but perhaps lacks just that creative touch which marks off high quality design from competent workmanship. Standards of landscaping are reasonable although it is possible to find a few examples which have been inadequately maintained. The employment of a separate landscape architect is less general than in Copenhagen. The architect more usually does his own detailing around buildings and provides the planting in collaboration with a nurseryman. The city gardener is responsible for large open spaces around schools for example and although his design is bold and durable, it appears to mature slowly. At Randersvej on the outskirts of the city there is a large new estate being comprehensively developed by several building societies each with their own architect working to a master plan provided by the planning office. Some of the blocks are of pre-fabricated construction. This has speeded work but has not resulted in building economies. The need to fit within a conventional building profile cannot have helped in this direction and certainly the architectural success is extremely doubtful.

There has been considerable official encouragement for the development of pre-fabricated building techniques, the Housing Ministry having given a bold lead.

The most successful application of a pre-fabricated building system was seen at Viby near Aarhus. (Figs. 10, 11.) Here the same construction system had been used for a library, municipal offices (including a police station), a large group of three-storey flats and a row of single storey shops. The construction module appeared to build up in ways which gave the architect a choice of well proportioned openings. The vertical module seemed readily suited for stepping linked blocks on sloping parts of the site. Design had a classical order and regularity which was maintained in the relationship of building



Fig. 9

Fig. 7. View across the Utterslev Mose Park, Copenhagen. On the horizon is housing development designed by Steen Eiler Rasmussen. Three-storey flat blocks are grouped around the tower blocks shown here with its construction crane raising the upper storeys

Fig. 8. Plan, housing layout, Copenhagen. Scale, 1: 5,000. Architect, Steen Eiler Rasmussen

Fig. 9. An attempt to create an urban environment in sharp contrast to the surrounding parkland. Architect, Steen Eiler Rasmussen. Landscape Architect, C. Th. Sørensen

enclosing walls but as costs did not permit this the landscape architect has been commissioned to provide forms of planting which will reinforce street enclosure. (Figs. 8, 9.) It is perhaps too early to comment upon this approach to design but it should be noted as a departure from current parkland traditions in Danish housing layout. The surrounding countryside with lakes and lush waterside vegetation is magnificent. Within the housing layout the present lack of greenery and the somewhat stark and unexciting architectural forms, as yet fail to be stimulating.

In Aarhus the arrangements of some of the flat blocks is reminiscent of that in some early German settlements dating from the 1920's and 1930's on the outskirts of Frankfurt. To allow retention of a reasonable green space within the layout, density requirements have forced these blocks to the very limit of their site, backing directly on to the pavement of the service road. Elsewhere in Aarhus the

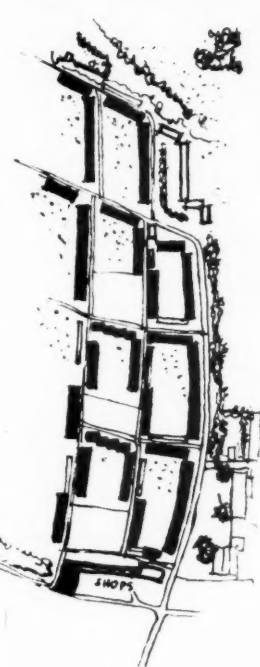
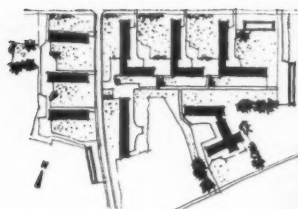


Fig. 8

heating from one main plant. The attendant is available for summer grass cutting, etc.

Out of the city Steen Eiler Rasmussen is attempting to create an urban environment within a new housing layout in sharp contrast with the surrounding parkland. (Fig. 7.) Hitherto much housing development has welcomed and indeed depended upon the free flow of parkland through the housing area but here seems to be a deliberate attempt to create an urban enclave. Many of the elements of the medieval city can be detected here. Flat blocks are brought right up to the edge of the pavement and where density and daylighting considerations result in gaps in street continuity the architect had wished to provide

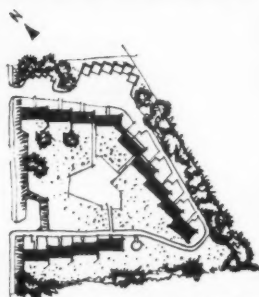


Figs. 10, 11 and 12. Housing layout, Viby. Scale, 1: 5,000. Right: a timber screen to a clothes-drying area among the pre-fabricated flat blocks. Below is a children's playground. Architect, C. K. Gjerrild. Landscape Architect, J. Arevad-Jacobsen

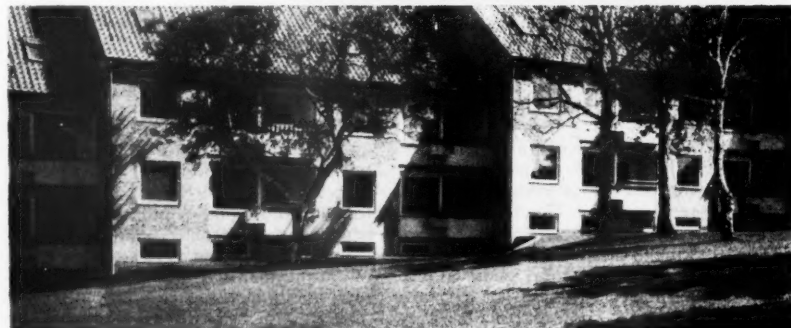
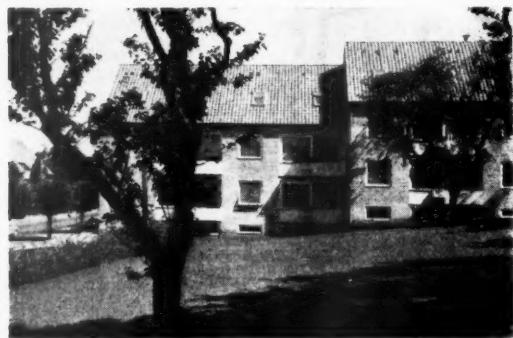


blocks with each other, the discipline of the right angle being used to create a sense of formal relationship. This formality was reflected in the work of the landscape architect who by the use of simple retaining walls had created a series of terraces or platforms stepping down the hillside. The whole of the planting design further emphasised the sense of formality by the use of simple sweeps of grass and bold grouping of trees and shrubs. At a few points the severity was deliberately broken. One corner was occupied by an old people's garden very informally designed and richly planted. Another corner was set aside as a children's playground imaginatively furnished, but simple and rugged enough to stand up to rough treatment. Related to each flat block was a clothes-drying cage, unobtrusive in itself and further screened by dense planting.

The same architect and landscape architect had worked on another site at Viby, this time using traditional materials on a steeply sloping site. (Figs. 13, 14, 15.) Housing had simple bold proportions and a very restrained architectural expression which would have left it quite dull and undistinguished without the rich contrast of plant forms. The flat blocks were skilfully stepped and the existing slope carefully contoured to flow down from one level to another without any change of cover to the roots of the fine birch trees kept near to buildings. To give the required



Figs. 13, 14 and 15. Housing layout, Viby. Scale, 1: 5,000.



The traditionally constructed flat blocks are skilfully stepped and the existing slope carefully contoured to flow down from one level to another. Architect, C. K. Gjerrild. Landscape Architect, J. Arevad-Jacobsen

car-parking area at the entrance to the housing group it had been necessary to scoop out a deep bay. This had battered retaining walls and mass shrub planting to stabilise the steepened banks. Not all housing in Aarhus has these exciting qualities. There is still some temporary housing to be cleared. It is sub-standard and drab but visually no worse than the average British pre-fab estate. Some of the early post-war flat blocks look a little dull particularly in the few rare cases where the landscaping has not been effectively maintained, a condition probably brought about by a combination of neglect and a garden layout not really sufficiently durable for comparatively high density development. To the south of the central part of Aarhus is a kind of urban cliff line where the true urban limit is passed and there is an abrupt change to more open forms of housing. Land here which is awaiting development looks very unkempt and untidy. Modern architecture is not universally accepted and some new flat blocks are still going up in very traditional designs often as neighbours to more progressive examples.

Children's Play Areas

With each large housing layout a well equipped playground for young children is provided. In recent years the design of these playgrounds has changed and now fixed equipment like swings and see-saws is seldom used. Facilities are provided for very young toddlers and children up to the age of seven. (Children do not start school until they are seven years old in Denmark.)

For the toddlers sandpits are standard items, usually very close to individual houses or flat blocks. Another common feature is the 'little house' to fulfil the psychological need well known to exist in young children. In the example at Viby this took the form of a series of unroofed stalls or bays, each with fixed benches and a table. (Fig. 12.) At Bellahøj in Copenhagen where there is a small playground at the base of each point block the 'little house' looks rather like a dog kennel. Its very traditional form is oddly at variance with the modern architecture. At Aarhus an example was seen of quite a large play-house with a steeply pitched roof upon which the children could climb. At the zoo in Copenhagen is an example where children can emerge from the dormer window of a play-house and slide down

opening off a main road, a school, laundry and the heating plant serving the whole site. The southern section has a kindergarten and laundry. Between the two is a very substantial piece of parkland, containing a restaurant, and a large amphitheatre. The construction of the latter showed a net saving on the total contract as excavated subsoil which would otherwise have been carted away was used.

The architects, and the landscape architect, have done everything possible to keep the parkland character and to carry through unbroken the sweep of the ground plane. Paved areas, including those for children's play, are kept near flat blocks. To the north of each block is the entrance forecourt, to the south the children's play area. Hard standings for fire-fighting purposes consist of hexagonal paving blocks

the site itself, giving an internal domestic scale not apparent from the extreme view of the layout, where the three-storey buildings will be unnoticed and only the dominant slab blocks appreciated as elements in the landscapes. This will be accentuated when the landscaping matures.

In the way that in Britain we have a deep rooted feeling for a parkland landscape there seems to be a sense of forest landscape closely linked to modern Scandinavian architecture. The house seen against a background foil of conifers, or the tall block soaring above them seems a natural expression. It is of course natural when building in the forest, but it must be remembered our parkland was a deliberate act of creation, not something natural and just to be preserved; the designers in this example are creating a new forest setting for their



Figs. 16 and 17. Roskildevej, Copenhagen. Three-storey flats and tall slab blocks. On the ground floor the three-storey flats have small private terraces opening on to a common green. Architects, Kay Fisker, Helweg Møller, B. Rammeskov, Erik Møller. Landscape Architect, C. Th. Sørensen



the roof. Even more imaginative play areas are sometimes designed. At Skoleparken in Copenhagen the 'little houses' are like wigwams or raised lakeside dwellings, set amongst steeply contoured hummocks through which the children can burrow into caves formed by large diameter concrete pipes. To make the play equipment complete (but a little weird) there are about a dozen dead trees specially chosen for their wide branching and readily climbable nature.

Multi-storey Housing

The most important post-war group of multi-storey housing in Denmark is the Bellahøj development, where there are more than a couple of dozen point blocks. The site is large giving a splendid opportunity for comprehensive design. It was owned by the Municipality of Copenhagen which held an architectural competition for a master plan for development of the whole site. This was won by Mogens Irming and Tage Nielsen. Their scheme gave the bold design framework of paired point blocks, linked by a common stair and lift well, with buildings from 8 to 14 storey height dominating the high land on which they are sited, and looking out over the city. Four separate building societies supervised the financing and construction of the project, each having their own architects who worked within the general framework of the competition scheme. The site was developed in two large sections. The first, to the north, has three shopping courtyards

which have spaced gaps to permit the growth of grass. There are two large underground car parks, but recent increases in the numbers of cars have made it necessary to widen estate loop roads to provide additional car parking areas. Even in the recently completed southern section the landscaping is beginning to assume a pleasant maturity, and obviously the whole character of the housing area would fail if the standard of landscaping failed to preserve the parkland atmosphere.

The actual degree of utilisation of the site (floor space index) is 0.76 giving a net residential density of about 140 persons per acre.

In another large housing layout multi-storey building is in the form of the slab block. At Bellahøj the point blocks dominate on rising ground, but off Roskildevej, the western approach to Copenhagen, the flat and rather characterless landscape will be dominated by huge slab blocks. (Figs. 16, 17.) The choice seems to be very deliberate, with the scale of building block carefully related to the scale of the landscape. The size and mass is not controlled by density requirements. Much lower buildings could have been compactly arranged to give residential densities equal to those obtained with the widely spaced 14 and 16 storey blocks. To provide a balance of house types and a contrast to the high blocks there are long low groups of three-storey flats arranged to give smaller scale sheltered areas within the site. This sense of contrast of scale will only be apparent from within

buildings. Landscape planting in the large open areas between blocks consists of flat sweeps of grass and tree planting using forestry techniques on a forestry scale. Instead of having individual trees planted as staked saplings, young transplants, mainly oaks, are planted out by the hundred and will mature to form strips of woodland. Within the site the three-storey blocks will be seen against a background of trees. From outside, particularly from the main road, the tall flats will be seen rising from the forest.

As a design conception, as a piece of large scale landscaping using slab blocks and forest as the main ingredients there is no doubt that the results will be magnificent. As a design solution to the problem of providing a satisfactory residential environment the matter is questioned. There is an accepted tradition of flat living in Denmark, particularly within the heavily built-up area of Copenhagen where it would be considered unreasonable to expect single family housing or even low blocks of flats. But where densities thin out towards the outskirts the arguments in favour of high building, to keep as much of the ground free as possible, begins to wear a little thin. The three-storey flat blocks with their modest scale, pleasant balconies and in the case of those on the ground floor, their intimate private terraces, may well prove more popular in their sheltered domesticity than their bold neighbours. The large blocks do seem to flout the lessons learned of designing for

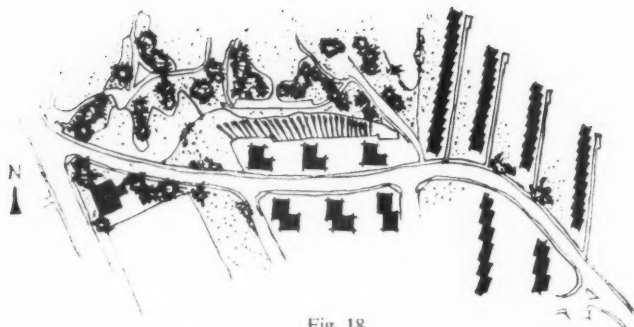


Fig. 18

Fig. 18. Housing layout, Vestparken, Randers. Scale, 1: 5,000. Fig. 19. Stepped slab blocks. Architect, Aksel Hag. Fig. 20 (below). Point blocks. Architects, Niels M. Buhl and Hans Klithøj

shelter. Their gallery access exposed to easterly winds is not likely to be popular in winter.

Construction methods on this site are of particular interest, prefabrication being highly developed. The advantages of both site work and factory fabrication being achieved by a central fabrication plant on the site being used to provide many of the heavier construction units.

The smaller towns in Denmark can also show interesting housing layouts. North of Aarhus, on the edge of the closely built centre of Randers several groups of multi-storey blocks have been skilfully arranged on very difficult sites. The whole area with its park, sports hall and stadium achieves a pleasant residential character which is completely urban in feeling. (Figs. 18, 19, 20.)

There are two main housing types. Small point blocks averaging seven-storey high flank the main road; to these blocks the entrance is at street level, and one storey above this is a 'shelf' which provides a common garden, safe children's play space and clothes drying areas, before rising steeply up to the park. There are also long six-storey slab blocks of flats. The longest is 360 ft. long but its stepped and staggered form tucked under a densely planted hillside leaves it without any slab monotony.

Architecturally the individual buildings are very well handled, but here as elsewhere in Denmark the importance of the design lies in the way that the whole neighbourhood has been worked out in careful detail to give a fine residential environment.



Flats and Houses, 1958 Design and Economy

THE INGREDIENTS of this new housing manual* are much the same as those of previous issues. It contains the latest additions to the basic policies for post-war housing established with the 1944 and 1949 manuals, it has a large number of example plans, and it is illustrated with photographs of the best existing houses, all the work of well-known architects, both official and private. True to form it is also better produced and more expensive than its immediate predecessors.

The new policy in the manual under review is very clearly stated—'High buildings cost more than low ones, and the lesson of Chapter I and Chapter III is that money can be saved in tens of thousands of pounds by planning for only the minimum of high building, or often none at all.' These chapters contain comparative layouts of developments at various densities from 78 to 160 rooms per acre, which show that even the highest of these densities may be achieved with a tightly planned mixture of houses, four-storey maisonettes and thirteen-storey blocks, the latter containing only a third of the total number of rooms.

This type of planning in its most economic form leaves little open space on the site not broken up by access roads, access for fire appliances, paths, and garages. In fact, the recommendations in the very welcome chapter on Space about Buildings, that generous facilities should be provided for children's play—pitches for the older children's games, separate playgrounds for five to ten year olds, and sand pits for the toddlers—would seem to be wishful thinking. The study layouts in any event do not include any playgrounds. On the present showing we will have a generation of children who can never dig a hole in the ground or keep a pet or build a hut out of orange boxes, or even climb a tree.

The difficult problem of car parking is considered at some length but the manual does not arrive at any very convincing solution to it. After showing the disadvantages of off-street open parking (unsightly), lock-up garages (too much space), garages under buildings (too few accommodated), garages in houses (in three-storey terraces only), multi-storey garages (expensive), it



suggests roofing in spaces between some of the buildings to provide large covered communal garages, with living accommodation built over part and the remainder used as terraces.

Having accepted the need for at least some high buildings the last sections of the book give plans for high slab, point and internal corridor blocks, with a comparison of their floor areas and estimated costs. Notes are given on the particular problems of building high and the appendices include summaries of methods of calculating for daylight and sunlight and the L.C.C. Code for Means of Escape as it affects flats and maisonettes.

Although it is claimed in the introduction that the plans and layouts are not type plans but are illustrated mainly for the purpose of comparison, they will no doubt be taken as such by the many local government officers responsible for designing housing schemes, including a large number who are not architects.

One suspects that standard plans are too often copied without a proper understanding of their architectural implications. If the Ministry would accept this criticism, which has been made many times before this, and would seek to establish *principles of design* based on the fundamental requirements of housing, more thought would have to be given to each individual scheme and the standard of design would consequently be improved. This is not to say that the designs shown are not good by today's standards; several designs for high blocks with internal access corridors and internal corridors, and internal bathrooms will undoubtedly be considered too 'advanced' by some local authorities.

But first what is needed is some new practical research and experiment into the ways people use and furnish their houses—into heating, design of windows and balconies, storage spaces, and into the various means of access to blocks of flats. The information collected after the war is out of date; council tenants now have their motor car, T.V. set, and hire purchase. Differences in housing practice abroad prove that there is scope for more practical experiment. This would be amply justified by the still vast size of the housing programme, and the important new task of rebuilding housing in the centres of our towns and cities.

JOHN STILLMAN [4]

* Published for the Ministry of Housing and Local Government by H.M.S.O.—10s.



The Moscow Congress

A Meeting arranged by the U.K. Section of the International Union of Architects, held at the R.I.B.A. 8 January

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., President R.I.B.A., in the Chair

Professor ROBERT H. MATTHEW,
C.B.E., A.R.S.A. [F]:

I had the honour to lead the British delegation. We are entitled to have four delegates; but, in fact, we could afford to send only two, Arthur Ling and myself. The whole British group, with students and friends, numbered about 25, and as an official delegate I was extremely grateful to have their support.

In accordance with custom the Congress was organised in all its details by the host country, and the whole thing was obviously keyed up to the highest level, opening with a meeting in the Grand Palace in the Kremlin at which the Senior Minister for Housing and Reconstruction was present, and finishing with a memorable and almost hilarious open-air party in the gardens of the Kremlin.

The meetings during the Congress were held in the great hall of the University, which also put at the disposal of the Congress a large amount of space for documentation and exhibitions and for many of the smaller meetings.

The main characteristic of most of the people attending these meetings is simply curiosity, the desire to see who is going to turn up as the membership grows and more countries are represented, and to see an unfamiliar country and its whole architectural situation.

In this sense the Moscow meeting differed somewhat from its predecessor at The Hague. It was no longer a meeting mainly of Western European architects, all more or less familiar with each other's circumstances, and with a few strangers thrown in. This time, I think for the first time in the history of the I.U.A., it had a genuinely world feeling about it. There are in fact only two noticeable gaps in the membership of the I.U.A. Apart from Egypt, which sent a very lively group of students and teachers, and Morocco, none of the countries in the African continent have so far joined the Union. The second gap—one which is very frequently commented on—is the British Commonwealth. This country is the only Commonwealth member of the I.U.A. at the present time.

The Congress at Moscow was the largest held so far, attended by about 1,500 people. The attendance at the sessions when papers were read was very high from beginning to end. To cope with such large meetings has become a problem. I imagine that the Congress to be held in London in 1961 will not be smaller, and in fact it may reach the 2,000 mark, so that to deal with the papers and discussions will be difficult.

Most of the British delegates took part in an informal excursion arranged by the very genial Professor Kolli, who collabor-

ated in the early days with Corbusier on the Trades Union Building. We saw four or five buildings of that period, all still in use and not too badly maintained, including newspaper offices and a few small blocks of flats. The Trades Union Building had a very large curtain wall façade which must, I imagine, have been one of the first curtain walls in existence. One can appreciate, looking at these interesting buildings, why it was decided that this kind of thing was so alien to the country as to be intolerable. Traditionally, Russian architecture has always had something of the exuberance of the orient.

We all know the attempts, which perhaps may appear a little pathetic, to retain this traditional exuberance, particularly in the great public buildings, the Moscow underground railway, the skyscrapers and the surface decoration of the great blocks of flats. There is no denying that it has a peculiar logic of its own. That it was not done a great deal better is a tragedy; but when we look at the majority of buildings erected in this and other Western European countries between the wars the difference in quality, on an objective view, is not at all obvious.

The situation today, has, it seems to me, put Russian architects on the horns of a dilemma. The aesthetics of the Stalin regime are now at an end.

The point is now being rammed home time after time that building costs must be drastically reduced. I believe that it is a mistake to interpret the recent change in architectural policy as in any way an aesthetic one; I feel that it is essentially economic. It is here that the dilemma appears, because, by a Government decision of two or three years ago, the building industry in Russia has geared itself irretrievably, it seems, to the prefabrication of precast concrete, and the aim is 100 per cent prefabrication within perhaps five years.

It is true that the doors have recently been opened both to students and to practising architects to Western European and American architecture, and they now see the architectural magazines, but it seems to me that the aesthetics of this total prefabrication will have to be worked out by Soviet architects largely by themselves. With the whole resources of planned industry behind them and an enormous programme of building ahead, Soviet architects would seem to have an almost unlimited opportunity to develop, if they wish to do so, an architecture peculiarly their own.

I do not think that we or any Western European country have a great deal to teach them except in one respect, but it is an important one. In almost every housing

development, apart from the most recent one the effect of large-scale planning tended to over-scale not only the buildings but the general environment as well. I believe that the Russian architects now realise this. In answer, however, to a criticism about scale at the Congress, the City Architect of Moscow replied that the Russian people liked these great layouts, these enormously wide streets and long vistas, because—and this is the point—'They know that it all belongs to them.' I think that that is a pretty weak argument for over-scaling anything. It will be seen from some of the slides, however, that a considerable effort is being made deliberately to reduce the scale; and I do not think that it is being done solely in the interests of economics.

With regard to reconstruction, the theme of the Congress, I shall make only one comment. From all that one can see of post-war reconstruction, particularly in towns destroyed by the enemy such as Kiev and Stalingrad and Minsk, the scope of reconstruction since the war has been immense. By 'scope' I mean that, unlike what happened in this country, rebuilding was not channelled into absolute priorities. The rebuilt town centres emerged from the ruins as a whole, sometimes completely replanned, with parks, public buildings, sports centres and so on as well as housing, the utilities and industry.

In addition to reconstruction, the two great areas of health resorts on the Baltic and the Black Sea have come into existence almost entirely since the war.

I met not more than a score of architects and architectural students, and to most of them I had to talk through the medium of an interpreter; but I am bound to say that I did receive a strong impression of purpose from most of those to whom I talked, which reminded me of the atmosphere prevalent amongst architects in this country just after the war. Nearly all these Russian architects worked in teams of one kind or another, on regional or city planning or on one of the great programmes of building. When a student qualifies, he is assigned to a team, perhaps in a distant city. All the young men to whom I talked had a great air of purpose about their future work.

The drive to rebuild and develop comes from the top with great force and with clearly-defined objectives, and its momentum is obviously felt at all levels.

In the last few years considerable effort has been directed to unifying the building industry, in the sense that architects, engineers, research workers and builders now seem to interlock as parts of one organisation, and the fragmentation into separate interests, which we in this country continually criticise but do very little about,

is, by deliberate Government decision, disappearing.

PAUL DRAKE [Student]:

Two of us went from the A.A., Brian Young and myself, to the Leningrad Students' Congress¹ which was held last July, immediately prior to the Moscow Congress. This was the fifth Students' Conference to be held, and about 135 people attended from all over the world. The biggest delegations came from France and Switzerland; there were delegates from West Germany and East Germany, and even from so far away as Bolivia and China, and one student from Cyprus. The satellite countries, of course, were represented.

When the two of us from the A.A. arrived, we found that we were the only British representatives, and so we became a British delegation.

The Conference itself was held in an old palace which is now a school of art, and about 250 people met in a vast circular room. We had head-phones by which we were able to receive by radio simultaneous interpretations, and huge quantities of soda-water were provided to keep us refreshed. We were given notebooks, and even copies of resolutions, printed the night before, which were duly passed. But, students being what they are, despite the elaborate arrangements everything was pretty chaotic and everything was late.

The subjects discussed were the modern city, architectural education, and international relations. These were exactly the same subjects as had been discussed the previous year in Copenhagen. There was no link-up between the two conferences at all. If there is to be a Students' Conference in connection with the I.U.A. Congress in London, it would be an enormous help if some co-ordination was arranged between what has been discussed and what is to be discussed.

Dealing very briefly with the three items discussed, on the modern city delegates from the Soviet countries read papers on the achievements of their country under Socialist planning. These amounted to statements of what had been done; there was very little criticism in what they said. They gave a great many figures. Delegates from the satellite countries, and particularly the East Germans, the Poles, the Hungarians and the Bulgarians, always made the point that only now was it possible for planning and architecture to go ahead, and that this had not been possible under the capitalist system.

There was talk about decentralisation and new towns, 'sputnik towns', and of the optimum size of towns, about 50,000. My fellow-delegate tried to put forward some of the more romantic ideas current among London students, such as traffic running four storeys above the ground, the glamour value of neon lights, the importance of enormous posters advertising society's heroes, such as Frank Sinatra and even Krushchev, and the need for the

redevelopment of the centres of cities to attune them to the modern technical way of life. This speech went down fairly well at the Conference and was given a polite reception, but later we discovered he had committed several blasphemies, particularly in talking about the destruction of the centre of cities.

On the second point, student education, the discussion was centred on specialisation. After three years of their six-year course the Russian students, at least in Moscow, specialise in one of three groups: as architect-planners, as industrial architects, or as general architects doing schools, hostels, housing and so on. The Russian students were not quite 'sold' on this idea of specialisation and were sympathetic to our ideas of the architect as a co-ordinator of various specialists. In fact, in the Conference there was a vote in favour of the architect as co-ordinator, but when the resolution was printed and circulated we found that this had been changed, and it appeared that the desire was that the architect should specialise. There was a bit of a row about that!

As regards the rest of their education, they are taught a great deal of history during five years of their course, particularly Greek and Italian Renaissance history. The few students who had been out of Russia had been to Italy on a coach tour visit to Italian palaces and so on. It is not until their third year that they start to study the modern movement. I do not think that they were very happy about that.

In addition to all their architectural education they have to put up with five political lectures every week. Some of those to whom we spoke objected to having to do this, and had been to see their professors to say 'If I am going to be an architect, I do not need all this stuff, do I?' They were told to go away, and that they would never be good architects until they knew their political theory.

In Moscow and in Leningrad we saw large exhibitions of students' work, enormous drawings beautifully done and rendered and also showing enormous Western influence. We saw their school libraries, and all the Western magazines were there. The British one which they liked most was ARCHITECTURAL DESIGN. There was more evidence of 'lifting' from these magazines in Leningrad than in Moscow. In Leningrad we saw elongated and enlarged Festival Halls and Berlin Congress Halls. We said to one student 'This looks just like the Berlin Congress Hall', and he said 'That's right, it is, but in Berlin the glass slopes one way, and here it slopes the other way'.

There is an enormous reverence for the past and always a consciousness of their great land with its millions of peasants. It is this love and respect for what is traditionally acceptable, which means that no barrier is created between the people and the artist, which perhaps leads to their condemnation of the constructivists. We did not meet anybody who really enjoyed constructivist building; the comment made was that it was a beginning, but a bad

beginning and had no connection with the past. On sight-seeing excursions we always found ourselves looking at the wrong building. There were wonderful constructivist buildings, small buildings, overshadowed by enormous 'imperial palaces' of flats. The Russians were always pointing out these new buildings as masterpieces of architecture while we were looking at the old ones.

It is extraordinary to find that in Leningrad, which was terribly badly damaged during the war, the vast reconstruction programme has left very little trace of the devastation, and a Western student would not think that the war had come anywhere near the city. The buildings which have been put up all look like Kingsway in yellow stone. In London you can tell where the bomb damage occurred by the new curtain walling of the buildings which have replaced those which were destroyed, but you cannot do that in Leningrad. In Moscow we went to the Corbusier building with three Russian students, only one of whom had been there before. None of them had been inside it. We had a great deal of difficulty in getting inside. It was completely new to them. The students had been working only for two years in a modern manner, and the teachers had been teaching them only for that short period of time. Their judgments on architecture and on students' work are always by standards of beauty. They say 'This is beautiful', and they do not get inspiration from sociological research or new thought about the way that society might be formed. They do not get inspiration from developing systems of locking together various units, and they still judge work by the old standards. On the other hand, they are enormously interested in all Western architecture. In our latest letter from Russia, they say that they spend night after night arguing about Frank Lloyd Wright and Corbusier and others, and they go away from these meetings tired out.

The last subject in the Conference was international relations. We thought it would be a matter of 'Let's all be happy and friends together', but the Copenhagen Conference in 1957 had chosen Berlin for the next Conference, which was to have been held this year. The Leningrad Conference had been slipped in between the two.

There was so much fuss about where the next Conference should be held, and trying to get people to change their minds, with enormous clapping when people from the satellite countries spoke and dead silence after speeches from the Western delegates, that we began to wonder whether the whole Conference had not been called in order that Berlin should not be the place of the next Conference!

Summing up the Conference, one could not help having the idea that one had been involved in an event where the propaganda potential had been exploited to the detriment of everything else. There was also far too much sightseeing, and all the delegates were tired.

It is very difficult in five days, with only

¹ This meeting was held entirely independently of the I.U.A.

25 hours' talk among 300 people, to arrive at any solutions, but over and above all these things there is immense value simply in meeting people and getting to know them, and particularly the Russians, and understanding their point of view. The Russian students were very fine people indeed. They spoke good English and were eager to get to know us. There were no barriers to our getting to know each other. They were almost aristocratic in their manners, and very much at ease and polite and conscious of their inheritance of power. When we were in Moscow and looked out over the city from the local hills they told us that this was the capital of half the world, and they said it with obvious pride and sincerity.

We had complete freedom to talk with them all the time. We sat with them in their cheap eating-houses and cafés, and they took us to an expensive Moscow restaurant. We argued politics with them quite freely. On the train from Moscow to Leningrad we told them the story of Animal Farm. We argued about architecture with them continually and toasted the world's greatest architects. They have wonderful enthusiasm and enormous confidence in the past and in the future, in complete contrast to the depression and disillusionment which we find over here. They talked freely about anything and everything, but there were horrible silences when a stranger came into the group. There were people who were very friendly but who afterwards disappeared, having been transferred to another delegation. We are extremely grateful, however, for the opportunity of meeting them.

A. W. CLEEVE BARR [A]:

Mr. Barr showed a large number of very good slides of Kiev and Moscow, which together with a lively and informative commentary, gave some idea of the wide extent of post-war Soviet architecture over such fields as public buildings, art galleries and concert halls, shops, underground stations, sky-scraper blocks of offices and hotels, etc., and also of the wide scope of planting of urban squares and avenues achieved by transplanting 15 to 20 year-old trees. They showed the inclusion within the central areas of cities of parks, sports stadia, swimming pools and other major recreational facilities.

Mr. Barr also showed some recent examples of experimental housing in Moscow and Kiev¹ and ended with a series of impressive shots to illustrate the fabulous restoration work at Kiev on the Pechersk Lavra (an active monastery), Rastrelli's beautiful baroque Andreyskaya church, and the medieval mosaics and gilded domes of the Sophieskaya Cathedral.

ARTHUR G. LING [F]:

Before I take you, by means of slides, on a very quick journey southwards to the

Black Sea, the Caucasus and Stalingrad, I must tell you something about the Congress itself.

The theme of the Congress was the construction and reconstruction of towns since the end of the war. The process of producing the material for discussion and exhibition started in the different national sections of the I.U.A. The collective result was a first-rate display in one of the sports pavilions of the Moscow State University, to which 26 countries contributed. The British material was honoured by a position close to the main entrance and attracted a good deal of attention, but the standard of presentation of most countries was exceedingly high.

A most dramatic climax was presented by the contribution from the United States. After looking at material from some of the Eastern and Asian countries, where traffic problems are negligible at present, one was brought face to face with the fantastic contrast of the cities of the United States, where immense motorways weave their way through, under and over the big cities, so that one became more aware of the motor-car than of buildings or people. I think that the effect on most architects was to make them feel that in the less developed countries not enough attention was being paid to the future problems of traffic, but that in the United States the motor-car seemed to have taken control of the cities.

It was impossible to study all this material properly in the time available. Everyone felt that some means must be provided whereby each country in turn could have the exhibition for organised discussion amongst architects. I hope that it will be possible to bring it to this country.

The documentary material prepared by the different national sections was published in book form. Long before the Congress was held it had been grouped according to whether it applied to North or South America, Asia, Western or Eastern Europe, and rapporteurs had been appointed to examine the material for these different regional areas so that they could put forward some conclusions to the Congress about the main achievements and shortcomings in urban construction since the end of the war. The main reports were on the functional and aesthetic aspects of town planning, but these were supplemented by reports on the legal, economic and social aspects as well as those concerned with the industrialisation of housing.

The President of the Union, at the opening session of the Congress in the Kremlin, reminded us of the importance of learning from our past efforts for the programme which lay immediately ahead; because, he said, there would be at the end of another 25 years one thousand million more people in the world. Expressed in terms of new towns, they would require 5,000 new towns each with a population of 200,000, and in fact 200 new towns would have to be built annually. Much of that development, of course, will not in fact be in the form of new towns but by accretion to existing towns, but that provides a measure of the problem which faces the world in the next

25 years. This is an enormous responsibility for architects.

The main report to the Congress, covering all the contributions, came from a Russian architect, Mr. Baranov. This was a most competent and comprehensive report, which revealed an unprejudiced and penetrating analysis of the problems which we face. On the aesthetic aspects he pointed out that modern town planning should not be an imitation of the old, but a creative development of the most important achievements of our predecessors, taking into account scientific and technological advances which would help people to enjoy a convenient life in our cities. That is a good definition of what we are trying to do, and showed that the Russian architects and town planners had changed their views considerably.

Van Eesteren, for Western Europe, dealt mainly with the problems of the remodelling of existing towns and warned everyone against the substitution of regulations for inspiration in urban design. I dealt with the problems of the reconstruction of the devastated cities and the building of new towns in Western Europe, and pointed out that only three war-damaged cities—Kassel, Rotterdam and Coventry—had tackled the problem of segregation of pedestrian and vehicular traffic. As regards new towns, I said that I thought that their size and location should not be decided in relation to abstract theories, but that the economic, geographical and social conditions should be the determining basis. It seemed wrong to me that Moscow and Leningrad should be thinking now about building satellite towns on the London model when there were such vast agricultural areas in the Soviet Union which could benefit from new towns, which would bring new social life to those areas. I felt that we had to be careful not to learn the wrong things from each other.

I supported Mr. Baranov's proposal that all large towns should have a chief architect to deal with the architectural and town planning problems, and finally I suggested that Soviet architects might well organise an international competition for the design of a modern town, a proposal which was later taken up with Mr. Krushchev by the Executive Committee of the Union. Subsequently I was interested to learn that such an international competition is now being promoted for the design of a new suburb of Moscow.

Professor Liang Siu-cheng spoke of the great leap forward in China today. Nearly two thousand new industrial centres were to be built in the country, requiring mass production techniques not only for factories but for all the building elements of a town. New towns in China were mainly being sited close to sources of raw materials, but new industrial centres were also being created in some of the backward districts.

Mr. Larrain, of Chile, spoke of the poverty of his country, of how the inadequate technical equipment for agriculture had led to a colossal migration to the industrial centres with shack development

¹ Fully described and illustrated in a series of articles by Mr. Cleeve Barr in a special issue of the ARCHITECTS' JOURNAL for 9 October 1958.

around the towns. The capital, Santiago, had increased its population by 80 per cent in the last 20 years.

Mr. Novotny, of Czechoslovakia, emphasised the need for breaking down the antithesis between the centre and suburbs of cities. In Prague he thought that there ought to be better communications between the centre and the outskirts.

Mr. Kamensky, Chief Architect of Leningrad, explained the new approach to planning in his city. Before the war it was intended that it should double in size, with a new administrative centre to the south, but now it was intended to have a more compact development within smaller boundaries, with satellite towns for any overspill population. In one case it had even been decided not to widen a street but to narrow it, because it was too big.

Signor Piccinato, of Italy, thought that too little attention had been paid to remodelling of old towns, and particularly those of architectural and historical interest, where to widen streets would destroy their organic unity. He thought that the old parts of towns should be combined in new town complexes, shifting the centre of administration and commerce so that it related to the new districts as well as to the old. He cited Milan as an example of the undesirable consequences of not working to such a principle.

M. Gutton, of France, expressed the hope that architects would be relieved of the main work of compiling technical town planning data so that they could concentrate their efforts on the aesthetic aspects of civic design.

The Chief Architect of Moscow, Lovisko, gave the Congress an idea of the housing problems in his city, where 700,000 new flats are required, and they have set themselves a programme of 100,000 flats a year. Half of this programme would be in the form of new city districts, some of which would be dealt with by the building of satellite towns, and they were very interested in the experience of Great Britain.

Robert Matthew, in a contribution which was very well received, spoke of the need to achieve human scale in reconstruction.

All these contributions were finally considered by a drafting committee which was entrusted with the preparation of a resolution to be presented at the concluding session of the Congress. I do not intend to go through this resolution at length, because you will have read a summary of it in the R.I.B.A. JOURNAL,* but I should like to say this. Although many of its paragraphs relate to requirements which have been accepted in this country, the position is not the same in all countries, and even for Great Britain it is desirable to draw the attention of the Government and of local authorities to some parts of it.

The resolution, in fact, has considerable significance. Many countries which are not in the favourable position of having the town planning legislation which we once had are finding that these resolutions of the I.U.A. help them with their govern-

ments to get housing programmes under way and to get new town planning legislation.

One or two points in this resolution I think might be the subject of reference by the R.I.B.A. Council to the Government, mention being made of the fact that they were adopted by the I.U.A. Congress in Moscow. The first refers to national and regional planning. The resolution says that to make full use of a country's resources the national plans must provide for the siting of industrial and other establishments, and projects of planning and building must be preceded by regional planning. How far have we achieved those aims in this country? In my view, we should remind the Government of the need for those basis plans.

Another recommendation deals with a matter of organisation, but a very important one. It states that each city should have a chief architect, endowed with appropriate powers and with an appropriate staff. How many cities in this country have no chief architect? Even when there is one, how many of them are responsible for the planning aspects?

Mr. A. A. Bellamy [A] and Mr. N. Keith Scott [A] also showed a number of splendid colour slides.

Practice Notes

Edited by Charles Woodward [A]

IN PARLIAMENT. Building Byelaws, England and Wales. Sir Alfred Bossom asked the Minister of Housing and Local Government and Minister for Welsh Affairs whether he will consider replacing the present system of over 1,400 locally-made building byelaws in England and Wales by a single set of centrally-made building regulations, as is proposed for Scotland.

Mr. Brooke: This could not be done without legislation amending the Public Health Acts. I agree, however, that it is right to consider whether or not such a change is desirable, and I propose to invite the views of the local authority associations, the London County Council, the interested professional bodies and the building industry, in order to inform myself fully before reaching a decision. (21 January 1959.)

Time and Progress Schedules. Sir Alfred Bossom asked the Minister of Education, if he will instruct technical schools or colleges, including architecture or building in their curriculum, to consider giving their last-year pupils instruction on the preparation of time and progress schedules, for the number of operatives and quantity of materials required which, though employed today with marked success in other countries, are seldom used in Great Britain.

The Minister of Education: It would not be appropriate for me to issue instructions on this, but as I told my hon. Friend last July, the inclusion in architectural and

building courses of the study of time and progress schedule is a development which I welcome. (29 January 1959.)

Local Government. Buildings of Historic Interest (Preservation). Sir Alfred Bossom asked the Minister of Housing and Local Government and Minister for Welsh Affairs, whether his department now has a list of small houses or cottages of architectural or artistic rarity which should be preserved for the enjoyment of future generations; and whether such a list is available for inspection.

Mr. Bevins: My right hon. Friend is required by Section 30 of the Town and Country Planning Act, 1947, to compile for the guidance of local planning authorities in England and Wales lists of buildings of special architectural or historic interest. Lists are prepared for each county borough and county district, and the completed list is deposited with the clerk of the council, who is asked to make it available for inspection. Copies are also sent to the national libraries, local antiquarian societies, the county archivist, the Society for the Protection of Ancient Buildings and other interested bodies. With each statutory list a supplementary list is issued which includes buildings of rather lesser interest.

Statutory lists contain the address of each building, but they do not distinguish small houses and cottages from other listed buildings. (28 January 1959.)

Fire Regulations (Tall Buildings). Sir Alfred Bossom asked the Minister of Housing and Local Government and Minister for Welsh Affairs to what extent, in view of the fact that so many tall buildings are now being projected in Great Britain, his Department has drawn up appropriate regulations covering protection from fire, such as fire escapes, lifts, etc., which will apply in varying degrees to buildings over 6 storeys, 12 storeys, and 20 storeys high, respectively, as is the case in the United States of America.

Mr. Brooke: Section 60 of the Public Health Act, 1936, is the principal statutory provision governing means of escape from fire in high buildings, which I think is the point my hon. Friend has mainly in mind. This section puts responsibility on local authorities; it does not give me power to make regulations. As far as flats are concerned, however, Appendix C of my Department's recent publication 'Flats and Houses, 1958' gives guidance about means of escape in case of fire. (28 January 1959.)

Ministry of Works. Government Departments (Building Projects). Sir Alfred Bossom asked the Minister of Works if he will recommend to all other Ministers whose Departments require buildings to be constructed for them in built-up areas of Great Britain, that they would gain substantially in price and also in time of construction, if they would require that, before inviting competitive tenders, every drawing needed to complete the work, including the full-size drawings, as well as complete specifications, also the complete

* November, 1958

bill of quantities, so that no prime cost sums are required, should be given to the contractors before submitting their estimates.

Mr. Molson: It is a part of the Government's policy of fixed-price tendering, which all Departments have operated since 1957 that projects should be fully planned before tenders are invited and prime cost items reduced to a minimum. The undoubted benefits of this policy are well-known to Departments and to local authorities. I understand that the great majority of suitable contracts let by Government Departments, local authorities and the nationalised industries are of this character. I hope the advantages of this kind of tendering is becoming more generally recognised by private building owners. (30 January, 1959.)

Building Sites (Soil Examination). Mr. Robert Jenkins asked the Parliamentary Secretary to the Ministry of Works, as representing the Lord President of the Council, what progress has been made in predicting whether the soil at any proposed building site is likely to be unduly corrosive to buried metal and pipe work; and what station of the Department of Scientific and Industrial Research is prepared to give advice on this matter.

Mr. H. Nicholls: Considerable progress has been made. Prediction is not a simple matter because it involves bacterial examination as well as chemical analysis of soils, and requires a close acquaintance with the influence of bacteria on the corrosion of metals. The National Chemical Laboratory can provide such a service. For example, it has made a soil examination recently for the United Kingdom Atomic Energy Authority at its Winfrith Heath site, in Dorset.

Mr. Jenkins: Is it becoming customary for this advice to be sought?

Mr. Nicholls: Yes. At present people seek advice after corrosion has taken place. We hope that people engaged on important projects will realise that this information is available to them before pipes are inserted into the ground and that it will assist them in selecting the best type of metal to be used. (3 February 1959.)

LONDON COUNTY COUNCIL (General Powers) Act, 1958. This Act received the Royal Assent on 7 July 1958 and contains amendments to previous Acts which are of interest to architects.

Section 12 enables the London County Council to delegate any of their functions under Part 3 of the Planning Act of 1947 to borough councils in respect of planning applications. An agreement must be made between the Council and the borough council and must be made with the consent of the Minister of Housing and Local Government.

Not later than three months before any proposals for the making of an agreement are submitted to the Minister for his consent the Council must put an advertisement in the LONDON GAZETTE of the intention to submit the proposals and specifying the place where copies may be inspected.

Functions of the Council in respect of the control of advertisements under Section 31 of the Act of 1947 may not be delegated. Under Section 14 the Council may, with the consent of the Minister, enter into an agreement with a local authority delegating any of their functions under the London Building Acts and the byelaws made under the Acts to that authority. Not later than three months before any proposals for such an agreement are submitted to the Minister the Council must put an advertisement in the LONDON GAZETTE of the intention to submit the proposals and the place where copies may be inspected. Any application made to the Council which comes within the delegated powers in an agreement, will be forwarded by the Council to the local authority and the applicant will be so notified and informed that the decision will be made by the authority.

The jurisdiction of the Tribunal of Appeal under the Building Act of 1939 will apply to references to a local authority under any of the functions delegated to them.

Under Section 15 the provisions of the Building Act of 1939 and the L.C.C. (General Powers) Act of 1955, in respect of dangerous and neglected structures will be transferred to the borough council on

a day appointed by the L.C.C. The Council may contract with the borough council so as to make available the services of the district surveyors and other officers.

Under Section 18 borough councils, on 1 January 1959, took over administration of lighting and facilities for washing and taking meals under Section 38 of the Shops Act, 1950.

MINISTRY OF LABOUR. Factories Acts 1937 and 1948, Building Regulations. On 1 January the Building (Safety, Health and Welfare) (Amendment) Regulations, 1958, came into operation. The Regulations affect the Register for keeping reports of inspections of lifting appliances and stability of cranes, etc., and the certificate of test and examination (Form 96) has been altered considerably in consequence. The Regulations and the revised Register are obtainable at H.M.S.O. price 4d. and 1s. 9d. net respectively.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY. Wage Increases. The Retail Prices Index figures published by the Ministry of Labour for 1958 show that an adjustment of one penny per hour increase is due to craftsmen and the Council has authorised publication of the new Standard Rates as from 2 February 1959.

New Rates per Hour (as from Monday 2 February 1959).

Craftsmen and Labourers:

	London		Grade		Liverpool District
	Inner	Outer	A	A1	
Craftsmen	s. d. 4 10½	s. d. 4 10	s. d. 4 9	s. d. 4 8½	s. d. 4 10½
Labourers	4 4	4 3½	4 2½	4 2	4 4

Apprentices:

Age	London		Grade		Liverpool District
	Inner	Outer	A	A1	
15	s. d. 1 2½	s. d. 1 2½	s. d. 1 2½	s. d. 1 2½	s. d. 1 2½
16	1 7½	1 7½	1 7	1 7	1 7½
17	2 5½	2 5	2 4½	2 4½	2 5½
18	3 0½	3 0½	2 11½	2 11½	3 0½
19	3 8	3 7½	3 6½	3 6½	3 8
20	4 3½	4 2½	4 2	4 1½	4 3½

Young Male Labourers:

Age	London		Grade		Liverpool District
	Inner	Outer	A	A1	
15	s. d. 1 5½	s. d. 1 5½	s. d. 1 5	s. d. 1 4½	s. d. 1 5½
16	1 11½	1 11½	1 10½	1 10½	1 11½
17	2 10½	2 10½	2 9½	2 9½	2 10½
18	4 4	4 3½	4 2½	4 2	4 4

Watchmen:

London and Liverpool, 26s. 6d. per shift.

Provinces, 25s. 3d. per shift.

NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS. Annual Holidays Agreement. The award of the Industrial Disputes Tribunal in 1957 prescribed that the two weeks of holiday must be granted in the summer period. This decision was unqualified, but in January 1958 the four parties introduced a new clause—5(d)—because it was realised on both sides of the industry that there would have to be a degree of flexibility in practice. The new clause was:—

'In individual cases where circumstances have prevented an operative from having more than one week of annual holiday within the summer period as defined, the other week shall be granted before 31 March in the next succeeding year, by mutual agreement between the employer and the operative concerned.'

Information reaching the four parties through the Holidays Management Company disclosed that the clause was still not flexible enough. Employers who had paid out on Part I of the Card after 31 October had to be told that the money could not be refunded. Yet it became clear that, on numerous sites in different parts of the country, many operatives had definitely expressed their wish not only to have one of the weeks but both weeks of annual holiday in the winter period.

Attention having been drawn to the difficulty of this situation the four parties have agreed the following new clause 5(d) in substitution for the existing one:—

'In cases where circumstances have prevented individual operatives from having the week or weeks of annual holiday within the summer period as defined, the holiday shall be granted before 31 March in the next succeeding year by mutual agreement between the employer and the operatives concerned.'

The four parties have also taken the opportunity of amending the existing provisions in respect of operatives' direct applications to the Holidays Management Company. Instead of the second paragraph of clause 8 (which prescribed 31 March as the last day) a paragraph is now added at the end of clause 7, namely:—

'No claim by any operative for payment of holiday credits in respect of any holiday period shall be entertained after three months' grace following 31 March in that period.'

These amendments were reported to the National Joint Council at its meeting on 14 January and are being incorporated in the printed documents issued by the Holidays Management Company. (14 January 1959.)

DEPARTMENT OF HEALTH FOR SCOTLAND. 'Designing for Safety in the Home.' Guidance on designing for safety in the home is given to all Scottish local authorities in a new booklet published by the Department of Health for Scotland (H.M.S.O. price 1s. 3d.).

The booklet has been prepared for members of housing committees as well as council architects and technical officers: it should also be of interest to prospective

house buyers and occupiers, private architects and builders.

In a foreword the Secretary of State, the Right Hon. John S. MacLay, M.P., says that there are, on average, three deaths from home accidents every day in Scotland. He calls on all members of housing committees and their officers to do their utmost to help in the campaign for safety in the home.

The main 'built-in' hazards and ways of preventing them are listed in the booklet. Although intended to improve the design of new houses, some of the recommendations apply also to existing houses.

FLATS AND HOUSES, 1958. The Ministry of Housing and Local Government has published a book dealing with some of the basic problems affecting the design and layout of housing schemes of high density. It also contains tables enabling the architect to estimate the cost of different sketch schemes, composed of buildings of different types and heights, from which a final choice is to be made. The book is obtainable at H.M.S.O. price 10s. net. See page 170 for a review of the book.

LAW CASE

Interference with Rights of Light. In an action tried in the Queen's Bench Division of the High Court the issue was whether the architect was negligent in respect of interference with the rights of lights of an adjoining owner in his design and siting of a block of flats on the building owner's land.

The building owner handed the architect a rough sketch of the proposed flats from which the architect made a detailed plan. The architect was not employed to supervise the erection of the flats as the building owner's builders had their own architects' department. The architect offered to assist the builders by providing drawings of the details of the design. When building work commenced on the site the adjoining owner complained to the building owner of the possibility of interference with his rights of light, and the architect told the building owner that if the siting of the proposed building was turned through 180 degrees it would be satisfactory. The building proceeded accordingly on the revised siting and the action for infringement of the adjoining owner's right of lights was settled which involved the building owner in an expense of £830 which he now claimed from the architect. The architect denied negligence and said that the building as originally sited did not infringe rights of light and that he was not employed by the building owner when building work commenced.

His Lordship, in giving judgment for the architect with costs, said it would appear that scientific determination of the degree of interference with rights of light caused by positioning of buildings visible from the openings to which the easement related was of comparatively recent development, and knowledge of it was restricted to five or so experts. In

some respects the three experts concerned in this case differed in their opinions.

If by reason of the manner in which an architect sited a building it infringed an easement enjoyed by a neighbouring owner of which the architect had actual or constructive notice, he had not exercised reasonable skill and care. The position was not clear where, as here, the employment related to only part of the programme. His Lordship was not satisfied that the building shown upon the plan, if the block plan was disregarded, could not have been satisfactorily erected on the site without infringing the easement enjoyed by the adjoining owner. As this would depend on the siting of the building in relation to the adjoining owner's building, only the block plan was material to the issue of negligence. This gave no dimensions whereby the location of the proposed building could be specifically defined. In his Lordship's judgment the block plan could not fairly be taken to be a siting drawing, because it gave no position from which the measurements for marking the footings could be taken.

Before the excavations could properly have been commenced the architect would have had to direct the builders further. If the architect's services were terminated before the end of September 1954, and the builders' architect substituted in his place, he incurred no responsibility for the siting of the builders' excavations. Thus the allegation of breach of duty was not well founded. His Lordship accepted that the architect's instructions were restricted to so much of the architect's task as was necessary to secure planning permission. He saw no reason why the architect should have referred to the rights of light that would only become significant when the siting of the building was under consideration. With regard to the need to modify the plan after the architect had advised turning the building through 180 degrees, the architect's willingness to assist the building owner, as with his offer to furnish detailed drawings to the builders, was purely gratuitous. No liability could attach to him. The architect believed that the building he had designed, if rotated through 180 degrees upon the siting marked out by the builders, would permit sufficient access of light to the adjoining owner's windows. This belief was worked out by a rough and ready rule which indicated that if the alleged obstruction be kept within a space bounded by a line drawn at an angle of 45 degrees from the horizontal level of the bottom of the lowermost ancient light, sufficient light would be left to avoid justifiable complaint. Unless and until the siting of the proposed building was accepted actually or implied by the architect as a professional obligation, he owed the building owner no legal duty, and his gratuitous opinion could not attract liability for the consequences of an honest though mistaken conclusion—if in fact the conclusion was mistaken.

The action was accordingly dismissed and judgment was given for the architect with costs. (THE ESTATES GAZETTE, 17 January 1959.)

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New Parks Shopping Precinct Aikman Avenue, Leicester

Architects: Symington, Prince and Pike

W. J. Prince [F], M. W. Pike [F], L. C. Candlish [A]

THIS BLOCK OF SHOPS AND FLATS was awarded the R.I.B.A. Architecture Bronze Medal in the area of the Leicestershire and Rutland Society of Architects for the seven-year period ended 31 December 1957.

The same architects won the award in 1938 and in 1946.

New Parks is a large housing estate to the north-west of Leicester, most of which has been built since the war by the City of Leicester Housing Department. Space on the site had been reserved for essential amenity buildings, and the architects provided on their sketch plans for a community and shopping centre. They were commissioned by the City Council to proceed with the shopping precinct.

The lower storey of the curved block houses the shops and is of r.c. construction providing a 'platform' on which 18 identical maisonnettes were erected with access from the service road at the rear by ramps at each end and stone stairway in the centre.

The maisonnettes are faced with golden-brown bricks on the back and front elevations, contrasting with dark liver-colour bricks on the two gabled ends. The columns of the arcade are finished in Portland Stone.

The general contractors were Messrs. William Moss and Sons Limited, Loughborough.



Pensions for Architects and Architects' Assistants

THE PROFESSIONAL MAN today desires to provide a pension on retirement for his employees as well as for himself. To meet the special requirements of architects and their staffs the A.B.S. Insurance Agency, Ltd. has drawn up the Individual Pension Plan outlined below, in conjunction with one of the leading Life Offices.

At the request of the Allied Societies' Conference this draft scheme is made public for as wide consideration as possible with a view to obtaining an indication of the support likely to be forthcoming if the scheme should proceed.

1. A highly flexible scheme is essential to enable the architect or architect's assistant to provide for his family and for a retirement pension. Over the years professional advancement often means changes which may involve moving from one firm to another or from salaried employment to self-employment in private practice.

2. To meet these conditions a draft scheme has been prepared on the basis of individual membership, to be open to architects and their assistants. Briefly it is designed to accomplish the following:

(a) To ensure that the architect or assistant may have continuous pension and insurance cover throughout his career, whatever changes may take place in his employment.

(b) By operating upon a group basis to ensure that the rates of premium for assurances and the annuity rates for pension shall be better than could be secured by an individual applying direct to the insurance company.

(c) Arrangements can be made where, if it is desired, an employer can pay some or all of the contributions.

(d) Capital sums may be taken in lieu of the pension, though this may be limited in certain cases under the rules of the Inland Revenue, where the employer contributes.

(e) The retiring age at which a pension becomes payable can—within certain limits—be selected by the subscriber. It is anticipated that sums paid on death will be free of Estate Duty.

(f) The Scheme as such cannot take past service into account. An employer wishing to recognise this may make additional separate provision for the employee concerned.

The following is an outline of the provisions of the scheme:

3. **Constitution of the Scheme.** To secure the maximum advantages of income tax and Estate Duty relief the Scheme will be set up under a Trust Deed. The Trustees will consist of individuals representing the profession. The benefits are secured by means of policies issued by the Friends' Provident and Century Life Office to the Trustees who will retain them but each member will receive a copy of every policy he effects.

4. **Eligibility.** The Scheme is open to architects and their assistants aged over 21 and under 60 on entering the Scheme.

5. **Individual Choice of Contract.** Policies may be effected for the following types of assurance:

(1) Endowment Assurance, with or without profits, under which the amount is payable on survival to retiring age or on earlier death. The sum payable on survival will provide the pension at maturity.

(2) Family Income Benefits: On death within the term of the assurance quarterly tax-free payments are payable for the remainder of the term.

(3) Term Assurance: The sum assured is payable on death within the term.

6. **Contributions by Employers.** An employer may arrange to pay some part or the whole of the premiums for his employee's benefits. Any such arrangements would be set out in the form of an exchange of letters, the terms of which will be approved by the Inland Revenue. The arrangement provides that the employer may at any time discontinue the payment of premiums or modify the arrangements subject to the condition that such discontinuance or alteration will not affect the benefits already accrued. Employers contributions in these conditions are recognised as a business expense by the Inland Revenue and are not regarded as additional income of the employee for Income Tax purposes.

7. **Death Benefits.** Benefits arising on death prior to retiring age will be payable by the Life Office to the Trustees and can be made available for the use of dependants immediately on death without having to go through the procedure of obtaining Probate or Letters of Administration. By virtue of these special arrangements it is anticipated that no Estate Duties will become payable on these death benefits.

It will be possible for a member to nominate a beneficiary to whom the death benefits are payable.

8. **Income Tax Relief.** Members will obtain

the usual rebate (at present up to 3s. 5d. in £1) on their premiums under the Scheme.

9. **Change of Employment.** On a member leaving the service of an employer who has under agreement contributed towards the premium for the employee's pension, similar arrangements may be entered into with a new employer or the employee may assume responsibility for the payment of the whole of the premiums himself. These premiums paid by the employee would attract Income Tax rebate up to a maximum of 3s. 5d. in £1. An employee setting up in private practice would of course become responsible for the payment of the whole of the contributions; these would not be chargeable as a business expense.

10. **Discontinuance of Premiums.** If a member discontinues payments of premiums before retiring age he will be entitled, on attaining that age, to receive a proportionate pension calculated on the contributions actually made.

The cash surrender value is obtainable if desired by the member who has taken up Endowment Assurance under the Scheme and received no contribution towards the cost from his employers.

Surrender by the member for cash may not be allowed under the rules of Inland Revenue where an employer has borne part or all of the cost of Endowment Assurance. In such a case proportionate benefits actually secured by payments made are obtainable at retiring age.

11. **Scale of benefits.** The amount of annual premium payable and corresponding benefits secured is fixed by the member joining the Scheme. These benefits may be increased subsequently by means of additional policies.

Assuming an annual payment of £100 the Life Assurance cover and pension payable at age 65 in the case of a male life are shown in the table below. These examples are based on current rates which are subject to change from time to time.

12. **Members working outside the United Kingdom.** Members working outside the

Endowment Assurance with Profits*

Age next birthday at entry	Basic Death sum assured	Estimated sum assured with profits†	Estimated Pension at age 65
	£	£	£ s.
25	3,896	9,141	879 1
30	3,352	7,070	679 18
35	2,827	5,359	515 7
40	2,319	3,952	380 1
45	1,825	2,795	268 16
50	1,348	1,856	178 10
55	878	1,087	104 11

*This type of Policy is found to be the most suitable in the majority of cases.

† The Estimate of profits distributed as Bonus additions assumes the maintenance throughout of the current Interim Bonus rate, viz: 45/- per annum compound. This is a figure less than the Bonus actually distributed by the Office for the last Quinquennium. It is not guaranteed.

United Kingdom will be able to effect policies under the Scheme. Any tax relief on the premiums will be subject to local law. If an employer pays part of the premiums the arrangement and tax relief will also be subject to local law.

13. **Transferability with the Public Offices.** It must be pointed out that employees in Central or Local Government service are compelled to participate in the superannuation schemes provided by those services. Therefore there can be no transferability between Central or Local Government employment and employment in other spheres so far as this or any other group pension and insurance scheme is concerned.

Book Reviews

Pioneer of Sociology: The Life and Letters of Patrick Geddes, by Philip Mairet. 8½ in. xx + 226 pp. incl. illus. + 9 pls. Index. Lund Humphries, 1957. £1 1s.

'Geddes, thou should'st be living at this hour; England hath need of thee.' This is the phrase which springs to mind and will not be dislodged, after reading Philip Mairet's excellent book *Pioneer of Sociology: The Life and Letters of Patrick Geddes*. How and why does Geddes stand out as different from his fellows—as unique, even today? Patrick Geddes (1854–1932) was born in an age of ferment, when men were beginning to recognise the superb inheritance to be developed and the accumulation of evils to be remedied in Britain as a result of a century of unprecedented industrial invention and expansion. Trained as a biologist, a pupil of Huxley's, Geddes' great achievement was to bridge biology and social science, showing that the unity and yet infinite variety of all related organic forms is as true for man and his environment as for the world of nature. Geddes took the method of diagnostic survey and analysis from biology, and applied it to town planning and the preparation of a town plan. Metropolitan growth-disease, said Geddes, should be treated by making better use of what we have; his approach to reconstruction was fundamentally one of respect and love for regional rootedness and loyalty; for the synthesis and not the further fragmentation of human relationships and human life.

No examples exist, alas, of Geddes' work in Britain. His methods must be studied in the reports he made for the regeneration of such cities as Dunfermline. But in India, where enlightened patronage gave him great opportunities, he showed what could be done to revive decaying areas, towns and neighbourhoods with existing resources—physical, human and historical. His esteem for everything of value, material or spiritual, in the local heritage; his almost miserly reluctance to part with the least scrap of it; his revelation of unrecognised usefulness, interest, or beauty, in, say, a building that other people had been willing to see condemned, and restoring it to use by some ingenious adaptation, has been well described by Mr. Mairet.

This book should be made compulsory reading for all planners. Lip service has been paid to Geddes, particularly during the year of his centenary celebrations, but little more. Civic regeneration in Britain would be revolutionised were his methods, his ideals, his innate respect for human individuality, the human background and its historical development, to be followed. 'Planning' as such, one might safely bet, would lose its stigma in the public mind and real civic and scenic regeneration become the aim, the pride and the joy of the citizen of every industrial area in the land.

ELIZABETH DENBY [Hon. A]

Collins Guide to English Parish Churches, edited by John Betjeman. 8½ in. 480 pp. incl. illus. + 64 pls. Index. Collins, 1958. £1 10s.

A parish church carries many minor overtones: rooks' noise, like cork twisting in a bottle, around the tower; the earnest notices in the porch; 'the dry smell of damp rot, the hassocky smell', as Mr. Betjeman has called it in another place, and the palimpsest of local history inside—the local microcosm, in fact. The hard facts of life and death it confronts us with, prevent real devotees from getting too precious about it. Mr. Betjeman, better than almost anyone, can explain to 20th-century half-believers the connections between human history and church architecture.

As readers of the Friday and Sunday press will already have observed, Mr. Betjeman with the help of Mr. Piper and a number of other knowledgeable people has produced this most welcome guide to 4,000 of the 16,000 parish churches still in England and the Isle of Man. The editor's introduction to the chronology of their architecture is not meant to replace Professor Thompson's two monographs, or Addleshaw and Etchells' book, but still it is not at all in the Kirkland Bridge category to which he modestly assigns it. It usefully places the parish church of each period in its social context, and this is useful especially with the Victorian churches, which some of us have taken so much for granted we know nothing about them.

Each county list is given an introduction as well, forming a series of surveys of the regional context, as well as a notable example of collaboration between the editor and his contributors. There are drawings by John Piper, which marry well with the sensibility of the main introduction, and there are 64 good photographs which one reviewer has said he would dispense with for the sake of adding 500 more churches to the lists—but they are there, I think, to remind us of the wonderful and tremendous variety that exists. Some of the juxtapositions are especially neat (although it would have been nice to see the Manx baroque put opposite Christ Church Spitalfields).

The lists of churches worth seeing include comment often evocative, sometimes incomplete. An aside to the typographer: those parentheses around each church dedication look terribly furtive when there is more than one to a town. Perhaps the

lists could have included the churchyard sculpture at Painswick (most guides only mention the yews), the ships carved on the south aisle at Tiverton (and the setting above the river), the river-and-docks backdrop of Woolwich parish church, the Thames mariners' beacon-church beside the flour mill at Gray's Thurrock, the wheel window at Cheltenham, the restoring architect and the documented Gibbons' work at St. Mary Abchurch...? In short, the book is no ghastly gazetteer; the spectacle of reviewers rushing in with enthusiastic contributions proves that. No church-crawler should be without it.

PRISCILLA METCALF

The Round Towers to English Parish Churches, by Claude J. W. Messent. 8½ in. xxv + 369 pp. incl. 180 pls. Norwich: Fletcher, 1958. £1 10s.

The author will be known to many from his ten previous books on historic architecture, chiefly in East Anglia, all illustrated by his peculiar literalistic and unarchitectural style of drawing. The subject is one that certainly needed treatment; 180 towers are shown, mostly in the Eastern Counties but a few in Berkshire and even Sussex and Dorset; the illustrations are on right-hand pages with short relevant text passages facing them, but the plate-numbers quoted in the list at the beginning are printed only on the text pages, and both text and plates are also paginated. A preliminary text section summarises origins, materials and construction, but the indispensable chronological survey, distinguishing Saxon, Norman, etc., examples, seems to be lacking. The author is one of several members of the R.I.B.A. who have entered the Christian ministry.

H. V. M. R.

Gardens of Japan, by Tetsuro Yoshida. Trans. by Marcus G. Sims. 11 in. 187 pp. incl. illus. Bibliog. Index. Architectural Press, 1957. £3 3s.

The attention given by Western architects in recent years to establishing a closer relationship between the house and its environment—often with rather dubious results—has undoubtedly been stimulated by interest in Japan where, as (the late) Mr. Yoshida has said, 'architecture can only with difficulty be separated from the garden'.

So many books on Japan have been published since the war that it is difficult for the reader to know which to choose. He need have no doubts about this one. Like Mr. Yoshida's earlier work, *The Japanese House and Garden*, it provides a classic exposition of its subject, beautifully and comprehensively illustrated with photographs and careful line drawings, and with a concisely written text, which has been well translated from the German edition. A romantic approach characterises the writings of most European authors in dealing with Japan, which often diminishes their value. Mr. Yoshida tackles the problem from the practical point of view of the designer.

J. C. P.

Notes and Notices

NOTICES

Fifth General Meeting, Tuesday 10 March 1959 at 6 p.m. The Fifth General Meeting of the Session 1958-59 will be held on Tuesday 10 March 1959 for the following purposes:

To read the Minutes of the Fourth General Meeting held on 3 February 1959; formally to admit new members attending for the first time since their election.

Mr. John Charlton, M.A., F.S.A., to read a paper on 'Royal Palaces in England from Norman to Victorian Times'.

(Light refreshments will be provided before the meeting.)

Sixth General Meeting, Tuesday 7 April 1959 at 6 p.m. The Sixth General Meeting of the Session 1958-59 will be held on Tuesday 7 April 1959 for the following purposes:

To read the Minutes of the Fifth General Meeting held on 10 March 1959; formally to admit new members attending for the first time since their election.

Mr. Bryan H. Harvey to read a paper on 'Early Industrial Architecture'.

(Light refreshments will be provided before the meeting.)

Session 1958-59. Minutes V. At the Fourth General Meeting of the Session 1958-59 held on Tuesday 3 February 1959 at 6 p.m.

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., President, in the chair.

The meeting was attended by about 320 members and guests.

The Minutes of the Third General Meeting of the Session held on Tuesday 6 January 1959 were taken as read, confirmed and signed as correct.

The President delivered his address to architectural students and Mr. Edward D. Mills, C.B.E. [F], read his review of the work submitted for the Prizes and Studentships, 1959.

On the motion of Dame Evelyn Sharp, D.B.E. [Hon. A], Permanent Secretary, Ministry of Housing and Local Government, seconded by Professor R. J. Gardner-Medwin, B.Arch., M.T.P.I. [F], a vote of thanks was passed to the President and Mr. Edward D. Mills, and was briefly responded to by them.

The presentation of prizes was then made by the President in accordance with the Council's award.

The proceedings closed at 7.17 p.m.

Session 1958-59. Minutes VI. At the Fifth General Meeting of the Session 1958-59 held on Tuesday 17 February at 6 p.m.

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., President, in the chair.

The meeting was attended by about 220 members and guests.

The Minutes of the Fourth General Meeting of the Session held on Tuesday 3 February 1959 were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President: *As Fellow*: B. V. Greenaway. *As Associates*: G. J. Badnell, N. H. Bashford, E. R. Bryan, J. P. Caneparo, G. J. Carroll, D. G. A. Church, K. S. Fresson, J. M. Griffiths, A. S. Jadhav, Miss J. M. King, William Lawes, F. J. M. Mair, J. S. Middleton, C. R. Milner, A. J. Noakes, J. R. Peverley, A. S. Pradhan, P. L. Robson, P. S. Scott, S. A. J. Silvester, Anthony Stocken.

Mr. N. Keith Scott, M.A., B.Arch. Dip.C.D., A.M.T.P.I. [A], having read a paper on 'An

Architect Looks at America', a discussion ensued and on the motion of Mr. Fello Atkinson, A.A.Dipl. [A], seconded by Mr. Robin Ironside, a vote of thanks was passed to Mr. Scott by acclamation and was briefly responded to.

The proceedings closed at 7.50 p.m.

British Architects' Conference, Cardiff, 10-13 June 1959. The British Architects' Conference in 1959 will be held at Cardiff from 10 to 13 June, at the invitation of the South Wales Institute of Architects. Full details of the

programme will be issued with the April number of the JOURNAL. Particulars of accommodation in hotels is given below.

Kalendar Supplement: Corrections. It is regretted that the name and address of Mr. Kenneth George Dines [A], c/o County Architect's Department, County Buildings, Huntingdon, were inadvertently omitted from page 39 of the Supplement to Kalendar 1957-58, and that errors appear in the name and address of Mr. George Herbert Barton Chantrey [A], 65 Camborne Crescent, Newcastle-under-Lyme, Staffs, on page 36.

Associates and the Fellowship. Associates who are eligible and desirous of transferring to the

BRITISH ARCHITECTS' CONFERENCE, CARDIFF, 10-13 June 1959

The Conference Committee have made provisional reservation of accommodation at the following hotels for members attending the Conference. *Early application must be made to the hotels, mentioning the British Architects' Conference*, as they will not guarantee to reserve the accommodation later than the end of March.

Hotel	A.A. Category	Rooms		Approx. Charges Bed and Breakfast	Distance from the City Hall
		Double	Single		
<i>Cardiff</i>					
Angel Hotel, Westgate Street	4 Star	20(T)	10	32/6 to 40/- + 10%	700 yards
(U) Central Hotel, near General Station	—	18(T)	23	22/6	1,150 yards
Grand Hotel, Westgate Street	2 Star	13(T)	5	27/6 to 30/- + 10%	900 yards
* Park Hotel, Park Place	4 Star	26(T)	38	33/- to 45/- + 10%	400 yards
* Queens Hotel, St. Mary Street	3 Star	20(T)	5	28/6 + 10%	850 yards
Royal Hotel, St. Mary Street	4 Star	20(T)	10	32/6 to 40/- + 10%	1,000 yards
(U) The Llandaff Hotel, Llandaff	2 Star	7(T)	8	26/6	2 miles
<i>Newport</i>					
* Kings Head Hotel, High Street	3 Star	4(T)	—	27/6	12 miles
* Queens Hotel, Bridge Street	3 Star	8(T)	20	30/-	12 miles
Westgate Hotel, Commercial Street	3 Star	10	—	27/6	12 miles
<i>Penarth</i>					
* Esplanade Hotel	—	6	6	25/-	5 miles
<i>St. Mellons</i>					
* St. Mellons County Club	—	8(T)	2	40/- + 5/- membership fee	6 miles
<i>Pontypridd</i>					
* New Inn, Taff Street	3 Star	10(T)	—	25/- + 10%	12 miles
<i>Bridgend</i>					
* Wyndham Hotel, Dunraven Place	2 Star	4(T)	4	25/-	19 miles
<i>Porthcawl</i>					
* Seabank Hotel, The Promenade	4 Star	15(T)	12	32/6 to 42/6	26 miles
* Esplanade Hotel, Esplanade	3 Star	10(T)	8	27/6 to 30/6 + 10%	26 miles

The names of the following hotels have also been given by the local Committee.

Cardiff: Alexandra Hotel, Queens Street; Bristol Hotel, Penarth Road; Philharmonic Hotel, St. Mary Street; Sandringham Hotel, St. Mary Street; (U) Beverley Private Hotel, 75 Cathedral Road; (U) The Cedars, Fildas Road, Llanishen; (U) Glenmore Private Hotel, 150-154 Newport Road; (U) Holmesdale Guest House, Newport Road; (U) International House, 45-47 Charles Street; (U) Linden Court, 191 Newport Road; (U) Penylan Hotel, Penylan Road; (U) Sunbury Private Hotel, 124 Newport Road. *Newport* (12 miles): Tredegar Arms Hotel, Station Approach; (U) Stow Park Hotel, Stow Hill. *Caerphilly* (7 miles): Clive Arms Hotel. *Barry* (8 miles): Barry Hotel, Broad Street; Ship Hotel, Harbour Road; The Marine Hotel, Barry Island; (U) The Knap Hotel, Lakeside; (U) Mountsorrel Private Hotel. *Cowbridge* (13 miles): Bear Hotel, High Street. *Bridgend* (19 miles): Dunraven Arms, Wyndham Street; York Hotel, Wyndham Street. *Porthcawl* (30 miles): Porthcawl Hotel; Pier Hotel, Esplanade; (U) Atlantic Hotel, West Drive; (U) Brentwood Hotel, 41 Mary Street; (U) Fairways Hotel, West Drive; (U) Sandville Hotel, Mary Street; (U) Westwood Ho Hotel, Esplanade.

Hotels marked (U) are unlicensed.

Hotels marked (T) have some twin-bedded rooms.

Hotels marked * have garage accommodation or private parking.

Public car parks are available near to hotels generally, and most hotels can arrange garage facilities if requested.

Fellowship are reminded that as from 1 January 1956 all candidates for the Fellowship will be required to submit to the Fellowship Examiners drawings and photographs or examples of work. Candidates may also be required to attend for an interview, which may however be dispensed with at the discretion of the Fellowship Examiners. The necessary nomination forms may be obtained from the Secretary, R.I.B.A.

Licentiate and the Fellowship. By a resolution of the Council passed on 4 April 1938 all candidates whose work is approved are required to sit for the Examination, which is the design portion of the Special Final Examination, and no candidates will be exempted from the Examination.

Note.—The above resolution does not affect Licentiate of over 60 years of age applying under Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925.

Members and Professional Affixes. The Council's attention has been called more than once to the practice among some members of adding a string of letters of doubtful value to the affix indicating membership of the Royal Institute on their letter paper.

This is a matter in which the Council obviously cannot dictate to members, and must trust to their good sense. It should be obvious, however, that the affix of a chartered body of high standing is weakened in effect by the addition to it of a string of other mysterious designations some of which probably indicate no more than the payment of an annual subscription.

Classes of Retired Members. Under the provisions of Bye-law 15 applications may be received from those members who are eligible for transfer to the class of 'Retired Fellows', 'Retired Associates' or 'Retired Licentiates'.

The Bye-law is as follows: 'Any Fellow, Associate or Licentiate who has reached the age of 55 and has retired from practice may, subject to the approval of the Council, be transferred without election to the class of "Retired Fellows", "Retired Associates", or "Retired Licentiates", as the case may be, but in such case his interest in, or claim against the property of the Royal Institute shall cease.'

'The amount of the annual subscription payable by such "Retired Fellow", "Retired Associate", or "Retired Licentiate" shall be one guinea, or such amount as may be determined by resolution of the Council, excepting in the case of those who have paid subscriptions as full members for 30 years, and who shall be exempt from further payment. A "Retired Fellow", "Retired Associate", or "Retired Licentiate" shall have the right to use the affix of his class with the word "Retired" after it, shall be entitled to receive the JOURNAL and Kalendar, shall be entitled to the use of the Library, and shall have the right to attend General Meetings, but shall not be entitled to vote. A "Retired Fellow", "Retired Associate", or "Retired Licentiate" shall not engage in any avocation which in the opinion of the Council is inconsistent with that of architecture. Nothing contained in this Bye-law shall affect the rights of persons who at the date of the passing of this Bye-law are members of the classes of "Retired Fellows" and "Retired Members of the Society of Architects".'

New Luncheon Room. The new luncheon room on the sixth floor will be open for service to members and their guests, and Students, as from Friday 6 March. Luncheon will be served as usual between 12 noon and 2 p.m. on weekdays except Saturdays.

BOARD OF ARCHITECTURAL EDUCATION

R.I.B.A. Final Examination, November-December 1958. The R.I.B.A. Final Examination was held in London, Leeds, Manchester, Newcastle, Edinburgh and Belfast from 26 November to 5 December 1958. Of the 354 candidates examined, 172 passed as follows:—

Passed Whole Examination	92
Passed Whole Examination subject to approval of Thesis.	1
Passed Part 1 only	79
	172

182 Candidates were relegated.

The successful candidates are as follows:—
Whole Examination

Adu-Donkor: Martin	Louden: A. G.
Aldrich: B. J.	Lucey: E. G.
Barby: Clive	McGill: I. G.
Beard: K. J.	McMurray: S. B.
Belcher: J. A.	Malone: M. E.
Berry: R. M.	Manton: Ramon
Bruce: H. J.	Marsden: A. T. W.
Bryans: J. K. (Distinction in Thesis)	Marsh: E. D.
Buck: J. A.	May: J. B.
Byrom: R. A.	Mehta: K. N.
Campbell: J. E. C.	Miller: R. K.
Cashmore: W. F.	Mitchell: W. I.
Chandawarkar: Y. M.	Morrall: Alan
Cheeseman: K. C.	Muir: J. H.
Clark: N. C.	Nugent: K. E. T.
Clemence: G. P.	Palmer: P. J.
Coats: I. H.	Percey: E. C.
Collins: A. J. W.	Perrin: G. A.
Crerar: W. G.	Perry: V. J.
Cuming: A. L.	Phillips: G. G.
Davies: D. T. I. G. (Distinction in Thesis)	Pratt: C. J.
Davies: J. F.	Price: Miss J. M.
Davies: R. S. I.	Raote: S. M.
Davison: Bryan	Richards: D. H. (Distinction in Thesis)
Dorrell: J. R.	Robertson: F. W. B.
Dryden-Brownlee: John	Rudowski: L. Kokot
Dudzicki: Tadeuz	Russ: M. J.
Dunn: I. P.	Sagasti: Valentin
Edginton: J. A.	Sawyer: J. H. A.
Everton: T. W.	Senior: T. R.
Farmery: I. H.	Shaw: Eric
Fetherstone: J. M.	Silvester: Colin
Gabb: J. K.	Smethurst: John
Godding: B. J.	Snashall: B. G.
Goodband: J. H.	Southard: A. J.
Granston: Dennis	Stanfield: D. J.
Hellawell: Michael	Stokes: J. A.
Howell: S. G. F. B.	Storie: John
*Hudson: G. A.	Sweeney: Miss G. M. C.
Hunt: P. D.	Talbot: M. J.
Hurley: A. F. W.	Taylor: Leonard
Ingleby: Dennis	Upton: A. J.
Johnston: I. A.	Walczak: L. J.
Johnston: Miss J. E. (Distinction in Thesis)	Whitehead: J. E.
Jones: E. R. P.	Worthington: R. G.
Kay: Derek	Young: F. A.
Lamb: John	

* Subject to approval of Thesis.

List of Successful Candidates who sat for Part 1 only.

Ablitt: A. H.	Barrott: J. D.
Anstead: E. T.	Bond: Miss M. E.
Barker: D. J.	Bond: P. A.
Barrett: J. R.	Bottomley: Colin

Braddock: M. I.	Hucklesby: A. J.
Brandenburg: A. D.	Hyett: D. J.
Bright: J. K.	Jackson: Alan
Broom: Arthur	Jones: Frank
Bruce: J. F.	Jones: Martin M.
Bryant: M. E. D.	Levene: S. S.
Burn: J. U. B.	Lewendon: P. N.
Cameron: Duncan	Lewis: G. L. R.
Campbell: I. G.	Lunn: Clifford
Claxton: K. G.	Maggs: J. K.
Collen: H. S.	Marsh: M. J.
Cook: R. J.	Mawson: P. O.
Cousens: J. R.	Messom: E. L.
Creedon: R. C.	Miller: Robert
Croft: H. K.	New: M. S. M.
Curtis: R. E.	Norton: K. W.
Davies: G. W. J.	Parkinson: Cyril
Deans: John	Power: E. C.
Earwaker: Jack	Power: Gerard
Elliott: Paul	Proctor: K. W.
Foster: D. A.	Prudhoe: W. K.
Fulford: Miss J. I.	Robson-Smith: R. W.
Gillham: G. B.	Senkowsky: H. E.
Goad: D. I.	Shackleton: P. G.
Griffith: Dennis	Sherrington: B. L.
Grimshaw: A. J.	Smith: Cyril A.
Grove-Stephenson: J. C.	Smith: Deryk
Hall: John	Snow: T. C.
Hall: J. B.	Story: P. E.
Harris: E. G.	Stuart: M. G.
Heasman: Albert	Tevendale: P. A.
Hewitt: D. C.	Wall: Trevor
Hickinbotham: Norman	Warner: Brian
Higgins: C. G.	Whitney: M. G.
Holmwood: M. R. T.	Wilkins: John
	Wood: K. F.

R.I.B.A. Special Final Examination, November-December 1958. The R.I.B.A. Special Final Examination was held in London, Leeds, Manchester, Newcastle, Edinburgh and Belfast from 26 November to 5 December 1958. Of the 236 candidates examined, 71 passed as follows:—

Passed Whole Examination	62
Passed Part 1 only	8
Passed Part 2 only	1
	71

165 candidates were relegated.

The successful candidates are as follows:—
Whole Examination

Adkin: George	Miller: D. R.
Albiston: A. W.	Miller: G. O.
Anderson: Morris	Milton: W. F.
Bowman: J. D.	Monaghan: L. W.
Bunton: Samuel	Moore: S. S. S.
Burniston: J. D.	Munden: P. J.
Caldwell: A. H.	Musset: Mrs. X. R.
Chandler: John	Olver: F. A.
Claridge: Miss M. M.	Pereira: G. C.
Collins: R. S.	Perrott: I. O. G.
Crane: P. G.	Portman: F. W.
De Silva: M. W. P.	Preece: D. T.
Edwards: Douglas	Prior: A. K. E.
Endering: M. G.	Raby: D. P.
Eyres: N. D.	Reynolds: G. J. D.
Forster: A. R.	Robinson: E. H.
Frew: Robert	Roseveare: P. C.
Grayling: B. D. P.	Russell: T. C. C.
Heatley: M. D.	Sanderson: A. M.
Hill: W. H.	Scott: J. J.
Hodgson: Russell	Sharp: James
Holliman: Miss P. G.	Shove: John
Janes: S. E.	Skinn: D. M.
Keal: W. H. G.	Smith: John Edgar
Kershaw: J. T.	Spillman: W. E.
Laniado: Ralph	Stobie: G. J.
Marginson: Eric	Thomas: R. B.
Martin: A. H.	Wareham: L. A.

Warner: J. H.
Watt: D. H. M.
Wood: W. G.

Young: B. O.
Young: Harold
Zins: S. A.

List of Successful Candidates who sat for Part 1 only.

Atherley: Sydney
Bird: P. J.
Blackwood: B. G. W.
Darling: J. S.
Shepherd: Mrs. Betty
Stoney: O. R. A.
Veevers: W. H.
Wallnutt: E. W.

Successful Candidate who sat for Part 2 only.
MacLean: Gilleasbuig

COMPETITIONS

New Town Hall, Milngavie, Dunbartonshire. The Provost, Magistrates and Councillors of the Burgh of Milngavie invite architects registered under the Architects (Registration) Acts and resident in Great Britain to submit in competition designs for a new Town Hall at Milngavie.

Assessor: Mr. William A. P. Jack, F.R.I.A.S. [F].

Premiums: £600, £400, £200.

Last day for questions: 30 April, 1959.

Last day for submitting designs: 30 June 1959.

Conditions may be obtained on application to: The Town Clerk, 3 Buchanan Street, Milngavie, Glasgow. Deposit £2 2s.

The National Gallery Site. Last day for submitting designs: 8 May 1959.

Application for the conditions must be made to: National Gallery Competition, The SUNDAY TIMES, Kemsley House, London, W.C.1, before Monday, 6 April.

Full particulars were published in the JOURNAL for February, page 143.

Roads Campaign Council Competition. Last day for submitting designs in the preliminary stage: 30 April 1959.

Full particulars were published in the JOURNAL for December 1958, page 66.

Design of Ceramic Sanitary Ware. The date for applying for conditions with forms of registration has been extended to 9 March 1959, and the last date for submitting designs in the first stage has been extended to noon on 2 May 1959.

Full particulars were published in the JOURNAL for December 1958, page 66.

International Competitions. A note has been received from the International Union of Architects that the conditions of the following competitions have been approved by them:

Cultural Centre, Leopoldville, Belgian Congo. The Belgian Congo Cultural Centre has promoted a contest of ideas calling for plans for a Cultural Centre to be built in Leopoldville. The competition is open to architects of all nationalities who are entitled to practise in their own country.

The jury of Assessors will be as follows: Mr. R. J. Neutra (U.S.A.), Mr. E. N. Rogers (Italy), Mr. L. Stynen (Belgium), Mr. M. Titz (Belgian Congo), Prof. C. van Eesteren (Holland), and a delegate of the I.U.A. who will serve on the jury as representative of the contestants.

A total sum of 250,000 Belgian francs has been allocated for distribution by the jury; no one prize will be less than 25,000 Belgian francs.

Last date for posting designs: 10 May 1959.

Last date for receiving designs: 25 May 1959.

Conditions can be obtained on application to the 'Centre Culturel du Congo Belge', 28, Avenue Marnix, Brussels, Belgium.

Plans of the building site and subsoil and aerial photographs of the grounds and the façades of the surrounding buildings will be sent on receipt of a remittance for 200 Belgian francs made out to the Belgian Congo Cultural Centre's postal checking account No. 617.92, Centre Culturel du Congo Belge or to account No. 5.024 at the Banque Lambert—2 Rue d'Egmont, Brussels, Belgium.

Dachau Memorial. The International Committee of ex-prisoners at Dachau invite architects who are veterans of the last war to submit designs in competition for a monument to the victims of the Dachau concentration camp.

The closing date for the receipt of projects by the promoters is 15 May 1959.

The jury of nine members includes two from the International Union of Architects and two from the International Association of Plastic Arts.

The first prize is 30,000 Belgian francs, the second and third prizes 20,000 and 15,000 francs respectively.

Conditions of the competition can be obtained from the promoters—the Comité International de Dachau, 97 Avenue de Stalingrad, Brussels, Belgium.

ALLIED SOCIETIES

Changes of Officers and Addresses

Royal Institute of the Architects of Ireland. Hon. Secretary, Oscar Richardson, 8 Merrion Square, Dublin.

South Australian Institute of Architects. President, J. S. Hall [A].

New Zealand Institute of Architects. Taranaki-Wanganui-Manawatu District Branch. Chairman, D. W. Robinson [A]. Hon. Secretary, L. K. James [A], A.N.Z. Bank Chambers, High Street, Hawera, Taranaki, New Zealand.

Birmingham and Five Counties Architectural Association. Annual Dinner and Dance. The Association's annual dinner and dance was held on 30 January, at the Grand Hotel, Birmingham, with the President, Mr. Edward Holman [F], in the chair. The R.I.B.A. was represented by the President, Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., accompanied by Mrs. Spence, and the Secretary, Mr. C. D. Spragg, C.B.E., and among the guests were the Deputy Mayor of Birmingham, Alderman J. J. Grogan, M.B.E., J.P., the High Sheriff of the County of Warwick, Alderman John Charles Burman, J.P., and the Bishop of Aston, the Rt. Reverend C. G. St. Michael Parker, M.A.

Mr. Holman proposed the toast of the City to which Alderman Grogan replied and Mr. Spence responded to the toast of the R.I.B.A. and its Allied Societies proposed by Alderman Grogan. Mr. Holman also proposed the toast of the Guests and Alderman Burman replied.

Northern Architectural Association. Annual Dinner. The Association's annual dinner was held on 13 February at the Royal Station Hotel, Newcastle upon Tyne. The President, Mr. J. H. Napper, A.M.T.P.I. [F], was in the chair, and the R.I.B.A. was represented by the President, Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., accompanied by the Secretary, Mr. C. D. Spragg, C.B.E. Among the guests were Brigadier H. I. Bransom, D.S.O., T.D., Deputy Lord Mayor of Newcastle, the Rt. Reverend Hugh E. Ashdown, D.D., the Bishop of Newcastle, Dr. C. I. C. Bosanquet, M.A., Rector of King's College, Newcastle, and Mr. J. A. H. Mottram, A.M.T.P.I. [A].

President, Edinburgh Architectural Association.

Mr. G. Talbot Brown [F], the Association's Vice-President, proposed the toast of the Municipal Authorities of the Province, to which Brigadier Bransom responded, and the Lord Bishop proposed the toast of the R.I.B.A. and its Allied Societies to which Mr. Spence replied. Mr. Napper proposed the toast of the Guests and Mr. Spragg replied.

GENERAL NOTES

Ford Foundation. English-Speaking Union Travel Grants, 1959-60. The English-Speaking Union is offering four travel grants to the United States, application for which is open to men and women of British nationality, aged between 30 and 50, who are experienced and practising in a branch of the arts such as painting, sculpture, music, architecture or design.

Each grant will cover the cost of travel to and from the United States and travel within that country. There will also be a subsistence allowance for each day spent in the United States, up to a maximum of 56 days, the recommended length of the visit.

The grant may be taken up any time from September/October 1959, but must be completed by 1 July 1960.

The closing date for applications is Saturday 2 May 1959.

Further particulars and application forms are obtainable from: The Secretary, The English-Speaking Union, 37 Charles Street, Berkeley Square, London, W.1.

1959 Congress of the International Council for Building Research, Studies and Documentation. On the occasion of its General Assembly in 1959, the International Council for Building Research, Studies and Documentation—CIB—will organise an international congress, which will be open to members of the CIB, their representatives and any other experts in the sphere of building. The Congress will be held in Rotterdam in 1959 from 21 to 25 September inclusive, and will be devoted to a number of subjects of topical interest to the building industry.

Introductory papers will be read by leading experts, whereupon these subjects will be put up for general discussion.

The subjects concerned will relate to building research—both fundamental and applied—and to building documentation and transmission of knowledge. Attention will be given to a number of special aspects of building in tropical regions.

The following are some of the subjects to be discussed: 'Design and calculation of structures; safety factors' by Prof. E. Torroja, Director of the Instituto Técnico de la Construcción y del Cemento, Spain; 'Research problems relating to the application of heavy concrete elements' by Prof. G. Kutznetsov of the Academy of Building and Architecture of the U.S.S.R. and Dr. M. Jacobsson, Director of Statens Nämnd för Byggnadsforskning, Sweden; 'Fundamental aspects of transmission of knowledge' by L. M. Gierzt, architect, Director of the Swedish Institute for Building Documentation. In all ten subjects will be put up for discussion. Among others, the following will be members of the Organisation Committee: J. van Eetinger, President of the CIB, Director of Bouwcentrum, the Netherlands; Dr. F. M. Lea, former President of the CIB, Director of the Building Research Station.

Further information can be obtained from: The Secretariat of the CIB, c/o Bouwcentrum, P.O. Box 299, Rotterdam, The Netherlands.

Royal Institute of Public Administration. Building Design and Costs. The need for more searching investigation into building design and costs is the theme of a Memorandum sent by the Royal Institute of Public Administration to those government departments which oversee the building programmes of local authorities. The proposal is that Development Groups, modelled on that so successfully used by the Ministry of Education for schools, should be set up to investigate other types of buildings erected by local authorities, such as housing, flats, libraries, police-stations, children's or old people's homes, clinics or municipal offices.

The proposal is the outcome of the work of a Study Group of the Institute into the 'Organisation of Building Construction and Maintenance by Local Authorities'. A full report on a wider range of subjects will be published later in the year. Meanwhile, the Study Group considered it so important that the techniques of investigation by a Development Group should be extended to other types of building as soon as possible, that they have written to government departments and local authority associations in advance of the final report.

Notes from the Minutes of the Council

MEETING HELD ON 3 FEBRUARY 1959

Appointments

(a) *R.I.B.A. Representatives on the Architects' Registration Council for the Year beginning 1 April 1959.* (i) 29 *Representatives on the Architects' Registration Council.* D. H. Beatty-Pownall [F], J. B. Brandt [F], J. E. A. Brownrigg [A], L. A. Chackett [F], Thomas S. Cordiner [F], Dr. F. F. C. Curtis [A], R. E. Enthoven [F], R. O. Foster [F], S. Vincent Goodman [F], R. D. Hammett [F], J. Kenneth Hicks [F], Leonard C. Howitt [F], R. J. Hurst [F], H. L. Kelly [F], Cecil Kennard [F], A. H. Ley [F], H. M. Liddbetter [F], Howard V. Lobb [F], E. D. Lyons [A], S. W. Milburn [F], E. D. Mills [F], T. E. North [F], J. T. W. Peat [F], F. B. Pooley [F], F. L. Preston [F], W. A. Rutter [F], R. H. Uren [F], A. Neville Ward [A], David B. Waterhouse [A]. (ii) *Four Representatives on the Admission Committee.* L. A. Chackett [F], H. Martin Liddbetter [F], E. D. Lyons [A], J. T. W. Peat [F].

(b) *South-West Essex Technical College and School of Art: Building Advisory Committee.* H. D. Matthew [F] (re-appointed).

(c) *Illuminating Engineering Society: Committee on Lighting and Safety in Building Operations and Works of Engineering Construction.* John B. Bickerdike [A].

(d) *National Playing Fields Association: Council and Grounds and Layout Committee.* Arthur Bailey [F] in place of W. H. Ansell [F].

(e) *B.S.I. Committee TIB/3: Definitions and Nomenclature of Timber.* Robert Maguire [A].

(f) *B.S.I. Committee B/61: Drawing Office Practice for Architects and Builders.* Richard Henniker [F].

Direct Election to the Fellowship. On the recommendation of the Council of the Royal Australian Institute of Architects, Mr. Marshall Weller Gervase Clifton, F.R.A.I.A., immediate past President of the Western Australian Chapter, R.A.I.A., was elected to the Fellowship under the provisions of the Supplemental Charter of 1925, Section IV, Clause 4.

R.I.B.A. Award for Distinction in Town Planning. Approval was given to the conferment of the Award for Distinction in Town Planning upon Mr. Noel Tweddell [A] and Professor John Fassler [A] (South Africa).

Joint Contracts Tribunal: Secretariat. Mr. David M. Waterhouse was appointed Joint Secretary of the Joint Contracts Tribunal in place of Mr. C. D. Spragg. The other Joint Secretary is Mr. Howard A. Close (N.F.B.T.E.).

Membership. The following members were elected: as Fellows 1; as Associates 278.

Students. 96 Probationers were elected as Students.

Applications for Election. Applications for election were approved as follows: *Election 7 April 1959:* as Associates 77. *Election 16 June 1959 (Overseas Candidates):* as Associates 28.

Applications for Reinstatement. The application of Mr. Thomas Lonsdale Smithson for reinstatement as a Licentiate was approved.

Resignations. The following resignations were accepted with regret: Edmund Addison Pratt [Subscriber], Douglas Henry Loukes [F], Henry John Everett Pyne [F], Archibald Ivor Richards [F], Revd. David Booth [A], Derrick Arthur Bridge [A], Mrs. Margaret Joan Burnett [A], Louis Carvill [A], Mrs. Margaret Dean [A], John Eyre [A], Mrs. Maureen Gee [A], John Brian Hilbrie Grundy [A], Mrs. Norma Halstead [A], Michael Bardill Hardy [A], Vernon Harry Lee [A], Mrs. Elizabeth Mary Leithead [A], Arthur Milner Lusby [A], Amos Ronald Fairlie McGahan [A], Geoffrey Frederick Marquis [A], Miss M. J. E. Mason [A], Mrs. Marjorie Joan Meikle [A], George Molnar [A], John Baptist O'Dea [A], Mrs. Vivian Hilda Palmer [A], Mrs. Margaret Anne Paul [A], Mrs. Eileen Mary Platt [A], Mrs. Mary Margaret Preston [A], Robert Charles Southwood [A], Miss Shirley Warwick [A], Norman Bruce Williamson [A], Raymond George Absolon [L], Albert William Wallace Lewis [L], Harold Provis [L], Bert Silvester [L], George Edward Twydell [L], William Williams [L], Louis Henry Worrell [L].

Applications for Transfer to Retired Members' Class under Bye-law 15. The following applications were approved: as Retired Fellows: Samuel William Ackroyd, Percy James Bartlett, Harold Butterworth, John Gordon Davies, John Scott Kelsall, John Herbert Pashen, Evan Wendell Roberts, The Hon. Godfrey Herbert Samuel, Thomas Edgar Smith. As Retired Associates: Frederick Wandlass Burnett, Alfred Francis Collins, Joseph Rushbrooke Keyte, George Frederick Rowe, Frank William Smith, Foster Rowland Stobart, Vivian Ware. As Retired Licentiates: William Arthur Funnell, Miss Gertrude Irene Henderson, Horace Jones, James Stanley Paton, William Wells, Joseph Henry Wyeth.

Obituary. The Secretary reported with regret the death of the following members: Colin Lancelot Jones [F], Herbert Charles Pettett [F], Charles Montague Cecil Armstrong [Retd. F], William Gregory Watkins [Retd. F], John Wilson, O.B.E., F.R.S.E. [Retd. F], David Strachan Haddon [A], John Thompson [A], Alan Buxton Dury [Retd. A], William Robert Christopher Clarke [L], Arthur William Curtis [L].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Obituaries

Herbert John Davies [F] died on 30 September 1958, aged 71.

Mr. Davies was an articled pupil of the County Architect of Denbighshire, North Wales, and a student at University College, London, under Professor F. M. Simpson [F], where he won prizes in architectural design.

During the First World War he served with the Royal Engineers in Egypt, Gallipoli and France.

He was in practice at St. Albans from 1949 to 1956 and at East Preston, Sussex, from 1956 until his death.

He had also been Senior Assistant Architect in the Chief Civil Engineer's Department, L.M.S. Railway, when his work had included the rebuilding of the Mechanics' Institute, Crewe, offices at Longbridge (Birmingham), Bangor Station modernisation, new passenger stations at Lea Hall (near Birmingham) and Apsley, and the Modern Enginemen's Hostels at Preston, Carlisle, Birmingham and Crewe.

From 1950 to 1952 he was Chairman of the Hertfordshire Chapter of the Essex, Cambridge and Hertfordshire Society of Architects and represented the Chapter on the Society's Council and at the Allied Societies' Conference.

Arthur Cecil Fare, R.W.A. [Retd. F] died on 7 October 1958, aged 82.

Mr. Fare commenced his career as a boy in the offices of Messrs. Silcock and Reay [F] of Bath. Later he joined Mr. C. W. English [F] and subsequently worked with many architects until he went into partnership with the late A. J. Taylor [F] in Bath. He retired in 1947.

Mr. G. J. Howling [Hon. A] writes in his tribute in the *BUILDER* for 24 October 1958:

'Fare was a competent architect, a good example of his later work (with A. J. Taylor) being the fire station at Bath, but he will be best remembered for his architectural water colours and pencil drawings. He worked with astounding swiftness and accuracy. He had a remarkable visual memory and often made at his leisure a completely accurate drawing of a building from a few reminders jotted down on the back of an envelope.'

Also in the *BUILDER* Mr. W. J. Wills who had been a close friend of Mr. Fare's for over 50 years writes:

'At an early age Fare's principal must have had some idea of his pupil's promise for he told me that one day Reay took him by the ear and led him up to a framed reproduction of H. W. Brewer's *BUILDER* drawing "Fifty Years of Architecture" made in 1892 and said, "Now Fare, do you think you will ever be able to make a drawing like that?" He did so nearly 50 years later when commissioned by the *BUILDER* to execute a drawing to celebrate the paper's centenary in 1942, showing about 70 examples of buildings erected between 1892 and 1942. The drawing was exhibited at the Royal Academy in 1943.'

As an assistant he was commissioned to do drawings of the Piccadilly Hotel and Regent Street for Norman Shaw. This was the beginning of a series of monumental drawings of London, real or conjectured, which he carried out for architects and other clients including the drawing of the new Waterloo Bridge with the City scene in the background and of Lutyens' scheme for the layout of the Trafalgar Square fountains and sculptures. Mr. Wills continues: 'His "Fifty Years of Architecture" drawing and those of the new Waterloo Bridge and Trafalgar Square will become historic records.'

Sir John Collings Squire, M.A. (Cantab.) [Hon. A], died on 20 December 1958, aged 74.

We are indebted to Mr. Oswald P. Milne [F] for the following appreciation:

'Jack Squire, as he was known to all his friends, was a distinguished poet, writer, and literary critic and the founder and editor of the LONDON MERCURY. He was an attractive and dynamic personality with an inexhaustible fund of ideas, who combined the sensitive feelings of a poet and an artist with the enthusiasm and drive which inspired others and got things done.

'He was recklessly generous of his gifts and of his time and devoted himself wholeheartedly to any cause that stirred him, without the slightest thought of self-interest. He loved his fellow-men and was loved by them and was accordingly a most congenial companion in any gathering.

'He was born in Devonshire, and was educated at Blundell's School and St. John's College, Cambridge. He had an abiding love of the West Country and of all things English, its history, its countryside, its buildings and its crafts. It was from this background that he derived the knight errantry to fight any dragon that raised its head to destroy what he valued.

'This led him to campaign against the disfigurement of Stonehenge by the clutter of army huts and unworthy shacks which had encumbered the open downs in its vicinity. That battle he won by getting them pulled down and completely cleared away. Again he energetically espoused the cause of the City Churches when they were threatened with destruction, and entered the battle over the pulling down of Old Waterloo Bridge, and he took a leading part in the establishment of Sadlers Wells Theatre.

'In addition to his other literary activities he wrote, in collaboration with Mr. J. L. Balderson, a charming play, "Berkeley Square".

'He twice, early after the First World War, fought an election for Parliament in the Radical interest, for he then held a political view which somewhat changed later in his life. Nor were these activities sufficient for his ardent nature, and in spite of defective eyesight he ran his famous cricket team of 'Invalids.'

'Architects will remember him best and owe him a debt of gratitude for the service he rendered to architects and architecture by founding the Architecture Club of which he was the first Chairman.

'The aim of the club was "to enlarge public appreciation of good architecture." Now that it has become something of a commonplace to find buildings dealt with as news and the names of their architects mentioned, it is difficult to recall the neglect which modern architecture suffered in the days before and immediately after the First World War. It is due to the work of the club that the daily newspapers and journals became aware of contemporary architecture.

'As Jack Squire used to say, "It all started like the human race, in a garden". Soon after the end of World War I, Theodore Byard, the Liedersinger, who had been a fellow-officer of mine in France and who, after demobilisation, had joined the publishing firm of Heinemann and Co., had invited John Squire and myself to lunch at his country home. During a conversation in the garden Jack had asked what architects were doing. He said that the public knew the names of some painters and sculptors, actors and writers, but as to architects, with the exception of Lutyens, no one knew their names or their work, and the Press never dealt intelligently with the subject of modern architecture and building. "Something", he said, "must be done about it", and that afternoon he and I decided to bring together at a dinner a few architects and a few writers to talk the matter

over. Jack Squire knew everybody in the literary world, and the result was a decision to start a club, limited in numbers, where architects, writers and journalists and interested laymen, could gather together; but architects were not to be in the majority. The aims of the club were broad. It was not concerned with any school or phase of architectural fashion, but was to encourage really good work.

'The club was an immediate success. It appealed to the many people who loved buildings and it loosed the pens of writers and critics who had so far been silent about contemporary architecture. Thomas Hardy was the first President, and Jack Squire became the Chairman.

'Referring to the old records, one finds on the Committee, among others, J. C. Squire, H. Clutton Brock, Sir Lawrence Weaver, Oswald Barron (the "Londoner" of the EVENING NEWS), James Bone, and of architects, G. Gilbert Scott, Ralph Knott, Professor Reilly, Vincent Harris and Austen Hall. The list of members claimed men and women distinguished in literature, politics and many walks of life. Besides its dinners and meetings one of the first activities of the club was to organise an exhibition of architecture of the last 20 years illustrated by photographs of actual buildings and models, and this was staged at Grosvenor House in Park Lane (now demolished) lent for the purpose by the Duke of Westminster. It received much notice in the Press and was very well attended. This was practically the first photographic exhibition of modern architecture and paved the way for the numerous exhibitions of architecture to which we are now accustomed.

'A few years later the R.I.B.A. did him the honour of electing him an Honorary Associate. This pleased him much, for at the inception of the club some of the powers of the R.I.B.A. looked askance at an incursion into the architectural field which seemed to them their especial province. However, he had always insisted that the Architecture Club would not encroach on the work of the professional societies and bodies but would supplement their work in a way that an official organisation could not attempt.

'When in 1933 he was knighted, his many friends gave a dinner in his honour at the Dorchester Hotel and the numerous and distinguished company showed how very wide were his interests and how warm were his friendships.'

James Osbert Thompson [Retd. F] [*Distinction in Thesis*] died on 19 July 1958, aged 75.

Mr. Thompson was articled to Messrs. Hornsey and Monkman of York and became an assistant in the Municipal Offices in Londonderry and then in Sheffield, where he remained for nine years. He was appointed Surveyor to the Education Committee in Leicester in 1923 and retired in 1948. He was a past President of the Leicestershire and Rutland Society of Architects.

Mr. J. H. Lloyd Owen [F], City Architect of Leicester, writes:

'During the period J. O. Thompson was Surveyor to the local Education Authority he was responsible for several new buildings in addition to the routine work of an education surveyor. The principal buildings he designed were Newark Girls' Secondary School, Alderman Richard Hallam Primary Schools, Marriott Road Primary Schools, Evington Valley Road Temporary School, Wyvern Avenue Temporary School, Humberstone Infants' School, Western Park Open Air School and Duxbury Road Special School.

'Although I did not know him well, I found he was very well respected by his colleagues. His particular forte was furniture and fittings design in which he was an expert.'

Membership Lists

ELECTION: 3 FEBRUARY 1959

The following candidates for membership were elected on 3 February 1959.

AS ASSOCIATES (278)

Adams: Archibald Arnold Worthy, Cardiff.
Anderson: James Gordon, D.A.(Glas.), Hamilton.
Arnott: John Cromarty, Motherwell.
Aroskar: Anand Dattaram.
Ash: Lewis Sidney, Dip.Arch.(Dunelm), Whitley Bay.
Ashburner: Reginald, B.Arch.(L'pool), St. Helens.
Aylett: Cliff. W., Ilford.
Bailey: Martin, Dip.Arch. (U.C.L.).
Baker: Derek Louis Hull.
Baker: Kenneth Noel, Hull.
Bandeekar: Chandrakant Baburao.
Barden: Kenneth, A.R.C.A., Sanderstead.
Barfield: Bernard, Leicester.
Barrie: James, Lesmahagow.
Bartlett: Peter John, B.Arch.(Auck., N.Z.), Auckland, New Zealand.
Bashford: Norman Hardy, Bromley.
Bateman: Bernard, Dipl.Arch.(U.C.L.), Bletchley.
Baxter: Robert Charles, Plymouth.
Beaven: Peter Jamieson, Christchurch, New Zealand.
Binner: Harry Eastwood, Lancing.
Birnie: George, D.A.(Edin.), Edinburgh.
Bodas: Vasant Vasudeo.
Borckenhagen: Carl Ludwig, B.Arch.(C.T.), Johannesburg, S. Africa.
Bose: Ratneswar, B.E.(Calcutta), D.A.Dip.T.P. (Glas.), Glasgow.
Brace: Derek, Dip.Arch.(Sheffield), Chelmsford.
Brennan: Brian, Listowel, Co. Kerry.
Brinkhurst: Frank Robert, East Grinstead.
Bromley: Cyril John, Dipl.Arch. (Canterbury), Dover.
Broughton: Brian John, Tenterden.
Brown: Graham Arthur, Bristol.
Bryan: Eugene Roy.
Buckhurst: Paul Sutherland, Dipl.Arch.(Canterbury), Maidstone.
Bull: David Leslie, Portsmouth.
Burrell: John Scott, Sunderland.
Butler: John Lionel.
Buttle: George Marshall, East Kilbride.
Button: Roger Martin, M.A.(Cantab.).
Cade: William Brian, York.
Campbell: Victor Ottwell, Belfast.
Caneparo: John Paul.
Carroll: Godfrey Joseph, Worthing.
Carter: Oliver Frederick, Manchester.
Castle: Thomas Edmund.
Charles: Rupert.
Chau: Kai-Heem, B.Sc.(Eng.), (Hong Kong), B.Arch.(Dunelm).
Choe: Alan Fook Cheong, B.Arch.(Melbourne), Singapore, Malaya.
Chuah: Yet Lian, B.Arch.(Sydney), Taiping, Malaya.
Church: Derek George Ames, Dipl.Arch.(Canterbury), Rochester.
Clamp: Henry, Pontefract.
Cochrane: John Morton, D.A.(Glas.), Glasgow.
Cook: James, D.A.(Edin.), Edinburgh.
Corbett: Victor Lindsay, Belfast.
Costello: John Audoen, B.Arch.(N.U.I. Dublin), Dublin.
Coveney: John E., Dublin.
Cowling: Raymond, Dipl.Arch.(Leeds), Harrogate.
Cox: Gordon Edgar Frederick.
Crews: Desmond Thomas, Kingswinford.
Cross: Thomas Anthony, Wymondham.
Dadge: Neil Jordan.
Davies: William Donald, Surbiton.
Davy: Donald Keith, Rotherham.
de Max: Maurice Montague.
Dinsdale: John Singleton.
Dodridge: John, Cobham.
Drury: Robert Benson, Billingham.
Duckworth: Philip Robert, Dip.Arch.(Birm.), Hamilton, Ontario, Canada.
Dunkley: Michael Charles, Chislehurst.
Elves: Gerald James, Carshalton.
Ellwell: Thomas, Dudley.
Evans: John Dennis, Dip.Arch.(Cardiff), Swansea.
Fairbanks: John Kemble, Westcliff-on-Sea.
Farrar: Alexander Haley, Hove.

Faulkner: Douglas Peter, Dip.Arch.(Dunelm), Vancouver, B.C., Canada.
 Faulkner: Kenneth, Leigh.
 Fellender: Lister Herbert, Trowbridge.
 Fenwick: Gordon Frederick, Hull.
 Fitzgerald: Joseph Bernard, D.A. (Dundee), Dundee.
 Fox: William Ernest, Shrewsbury.
 Freeman: Harvey, Preston.
 French: David John, Hemel Hempstead.
 Friend: Ronald Charles.
 Gargett: Peter Robertson, B.Arch.(Queensland), Brisbane, Queensland, Australia.
 Gibbons: Donald Charles, Chesham.
 Gibbs: Vernon Dennis, Wells.
 Giddens: Kenneth Conor, Bexley.
 Girling: Anthony Francis.
 Gladwell: Peter William, Gravesend.
 Gleave: John Geoffrey, B.A.(Manchester), Timperley.
 Goodman: Robert Howard, Dipl.Arch. (Northern Polytechnic), Ripley.
 Gordon: Frank Kevin Michael, A.A.Dipl., Shrewsbury.
 Grant: Henry David, Wallasey.
 Green: James Bernard, Leigh.
 Griffiths: John Michael, Ascot.
 Hackworth: John, Dipl.Arch.(Northern Polytechnic).
 Hambrook: Albert William Frederick, Bristol.
 Hares: John Philip, Bridgnorth.
 Harris: Brian, Rochdale.
 Hart: Robert Phipps, A.A.Dipl., Bedford.
 Haydon: Roy William, Norwich.
 Hears: Maurice Edward, Bristol.
 Hewitt: Derek Vaughan, Dipl.Arch.(U.C.L.), St. Helier, Jersey, C.I.
 Hiscocks: Barry Gordon, Bristol.
 Hodgen: Brian John, Dip.Arch.(Queensland), Toowoomba, Queensland, Australia.
 Honey: Alan Edward.
 Hooper: Raymond John, Buckhurst Hill.
 Howell: John Barnett, A.A.Dipl.
 Houghton: Reginald George Harold, East Grinstead.
 Hutchinson: Ernest George, Cheam.
 Imrie: Andrew, Stirling.
 Jack: William, Dip.Arch.(Abdn.), Peterhead.
 Jackman: Francis Patrick, B.Arch.(N.U.I. Dublin), Tramore, Co. Waterford.
 Jackson: Roland David, A.A.Dipl., Half Way Tree, Kingston, Jamaica.
 Jadhav: Arun Shantaram.
 Jaiyesimi: Samuel Oluyemi, Dipl.Arch. (Northern Polytechnic).
 Jarrett: William Edward, A.A.Dipl.
 Jeffery: Michael Wilson, B.Arch.(Dunelm), Newcastle upon Tyne.
 Jenner: Gordon John.
 Jennings: Douglas Arthur, B.Arch.(C.T.), East London, Cape Province, S. Africa.
 Joe: Kum Chuey, B.Arch.(Auck., N.Z.), Upper Hutt, New Zealand.
 Jones: Albert Frederick, Orpington.
 Jones: Kenneth Edward, Chester.
 Jones: Peter Stenson, Winchester.
 Judd: (Miss) Shirley Valerie.
 Jupp: Keith Edward John Austen, Brighton.
 Kaberry: Anthony Russell, Rochdale.
 Kennedy: Cecil Frederick, Newtownabbey, Co. Antrim.
 Kennedy: James Braid, D.A.(Dundee), Dundee.
 Kerr: William, D.A.(Glas.), Ardrossan.
 Kho: Tje Jam, B.Arch.(Sydney), Sydney, N.S.W., Australia.
 King: (Miss) Jill Margaret, Haywards Heath.
 Kirk: Anthony John, Dip.Arch.(Hull), West Wickham.
 Knott: Clement James, Dip.Arch.(Leics.), Leicester.
 Koh: Kim Chuan Rex, Kuala Lumpur, Malaya.
 Kozik: Mieczyslaw Joseph, Richmond, Surrey.
 Kruger: Jacob, B.Arch.(Rand.), Johannesburg, S. Africa.
 Laidlaw: James Robertson, D.A.(Edin.), Edinburgh.
 Lakin: James Milne.
 Lamb: Derek Arthur, Dip.Arch.(Cardiff), Cardiff.
 Lasserre: Professor Frederic, B.Arch. (Toronto) F.R.A.I.C., Vancouver, B.C., Canada.
 Law: Thomas Stuart, D.A.(Edin.), Edinburgh.
 Lawes: William.
 Lawrie: Gerald Charles Hindley, Dipl.Arch. (Northern Polytechnic).

Ledaire: Lucien Robert, B.Arch.(N.U.I., Dublin), Dartmouth, Nova Scotia, Canada.
 Lee: Choon Sin, B.Arch.(Sydney), Kluang, Johore, Malaya.
 Leeson: James Patrick, D.A. (Dundee), Belfast.
 Lelliott: Christopher George, Dipl.Arch. (U.C.L.), Basingstoke.
 Lester: (Miss) Alice Meriel, Woking.
 Lewis: John Owain, Chester.
 Lightowler: Henry Charles, Farnham Common.
 Linton: Eric Irving, Ormskirk.
 Lister: Derek Chappelow, Dewsbury.
 Loggie: James Jamieson, D.A.(Glas.), Paisley.
 Luke: Colin Keith, Stanley.
 McFadzean: Ronald, D.A.(Glas.), Whitecraigs.
 Mackenzie: Alexander John.
 McNay: David Alexander Barclay, Carlisle.
 Main: Christopher John, B.Arch.(L'pool).
 Mair: Frederick John Malcolm.
 Makepeace: Philip Edwin, Knowle.
 Marsden-Smedley: Christopher, B.A.(Arch.) (Lond.).
 Marsh: Geoffrey, Stafford.
 Marsh: John Edward, New Malden.
 Martin: Peter Barry, Auckland, New Zealand.
 Matthews: Anthony James.
 Mawhinney: James Atkinson, Belfast.
 Metcalfe: Gordon, Burnley.
 Middleton: John Stuart, Heywood.
 Miller: John Harmsworth, A.A.Dipl.
 Milne: Colin David, A.A.Dipl., Vancouver, B.C., Canada.
 Mitchell: John Trevor, Hull.
 Mole: Antony John, Dipl.Arch.(U.C.L.), Farnham.
 Mollison: Hugh Dalgety, Sevenoaks.
 Moore: Jack, Wakefield.
 Morgan: Vernon John, Rogerstone.
 Morris: Anthony Edwin James, Dipl.Arch. (U.C.L.).
 Morris: Walter Harold Frederic, Chester.
 Morrison: David Alan, Paisley.
 Morton: John Muir, Dip.Arch.(Manchester), Brisbane, Queensland, Australia.
 Munday: Alfred Hugh, Dipl.Arch.(Oxford), Oxford.
 Murphy: Eamonn, Dublin.
 Murray: Kenneth, Chorley.
 Murtagh: Alexander Thomas Henry, Dipl.Arch. (Kingston), Carshalton.
 Musson: Frank William, A.A.Dipl., North Vancouver, B.C., Canada.
 Nadodwalla: Dhumjishah Sorabji.
 Noakes: Anthony John, B.A.(Arch.)(London).
 Norman: Trevor Gail Goodier, Stockport.
 Nugent: Robin George Colborne.
 O'Brien: Gerard Patrick, B.Arch.(N.U.I. Dublin), Bristol.
 Olley: Richard James, A.A.Dipl., Braintree.
 Opher: Philip Fane, A.A.Dipl.
 Otter: Christopher John, Dipl.Arch.(Oxford), Oxford.
 Owen: Dennis Roy, A.R.I.C.S., St. Albans.
 Paine: Alan Charles, Lowestoft.
 Parkinson: Brian Michael Gerard, Bristol.
 Parsons: Michael Patrick, Dipl.Arch. (U.C.L.).
 Patel: Chandrakant Gulabdas, Crawley.
 Paterson: Thomas Allan, Glasgow.
 Pearson: Captain Charles Edward, Leyland.
 Penn: Anthony Willis, Dip.Arch.(Birm.), Kenilworth.
 Peverley: John Richard, Dipl.Arch.(Canterbury), Dover.
 Phillips: Frederick Brian, Newport, Isle of Wight.
 Phimister: Donald MacKay, D.A.(Dundee), Wick.
 Pickering: Michael Noel, A.A.Dipl., Portsmouth.
 Pitches: Grant Keith, Dip.Arch.(Leics.), Cambridge.
 Pradhan: Arvind Shrikrishna.
 Priestley: Geoffrey, Cleckheaton.
 Pursey: David Howard Clifford, Dipl.Arch. (Northern Polytechnic), Lyndhurst.
 Quarmby: Arthur, Dipl.Arch.(Leeds), Huddersfield.
 Ramsay: Albert, D.A.(Dundee), Toronto, Ontario, Canada.
 Reading: Lee.
 Redmond: Leslie, Belfast.
 Reid: Alistair Moray, Dip.Arch.(Leics.), Queniborough.
 Reid: William Finlay, Dipl.Arch.(Leeds), Belfast.
 Ribeiro: Edgar Francis Noel, Manchester.
 Richardson: Carl John, Southend-on-Sea.
 Richmond: John Michael, Dover.

Roberts: Richard John, Nottingham.
 Robinson: Kenneth Rothwell, Bolton.
 Robinson: Victor Holland, Newtownbrea, Co. Down.
 Rose: Frederick William, D.F.C., Ottawa, Ontario, Canada.
 Rossen: (Mrs.) Vivian-Iris, B.Arch.(C.T.), Salisbury, S. Rhodesia.
 Ryan: James Matthew, B.Arch.(N.U.I., Dublin), Ballymahon, Co. Longford.
 Sadler: Michael Russell, Dipl.Arch.(Kingston), Epsom.
 Savage: Stanley Kane, Newtownabbey, Co. Antrim.
 Savage: William James, Comber, Co. Down.
 Saville: Bryan Francis, Dip.Arch.(Birm.), Chingola, Northern Rhodesia.
 Scott: Peter Stuart, Romford.
 Sharp: Leonard Stanley, Nottingham.
 Shryane: John, Newcastle, Staffs.
 Silvester: Silvanus Alfred John, Gloucester.
 Smith: Alan Thomas, Dip.Arch.(Leics.), Lincoln.
 Smith: Frederick John Ridley, B.Arch.(Sydney), Gordon, N.S.W., Australia.
 Smith: Harold Shortland, Bilston.
 Smith: John Shortland, Dudley.
 Smith: Robert Mortimer.
 Solman: William Sidery, Dipl.Arch.(Northern Polytechnic).
 Sowerby: John Malcolm, B.A.(Cantab.), D.A. (Edin.), Middlesbrough.
 Spence: Robert Michael MacKenzie, Bolton.
 Spratley: John Arthur Raymond, Richmond, Surrey.
 Stephens: David Lewin, Dipl.Arch.(Northern Polytechnic), Erith.
 Stevens: Peter Lewis, Woking.
 Stevens: Reginald Anthony, Wolverhampton.
 Stevenson: Michael Noel, Balcombe.
 Stewart: Robert Walter, Dip.Arch.(Dunelm), Vancouver, B.C., Canada.
 Stocken: Anthony, Salisbury.
 Stubbings: Reginald Henry.
 Stuckey: John Michael, A.A.Dipl., Bridgwater.
 Sturrock: David Smith, D.A.(Edin.), Dunfermline.
 Sutherland: Ronald Scott, D.A.(Dundee), Fife.
 Swann: Norman Henry, Halifax.
 Tanner: Bryan James, Southsea.
 Taylor: Antony, Rochdale.
 Tenney: James Westwood, Edinburgh.
 Tennakoon: Panini, Bambalapitiya, Colombo, Ceylon.
 Thrower: Vivian John.
 Thurrott: Maurice John, Bradford.
 Tong: David Ronald, Reading.
 Tranter: Alfred Ernest, Bristol.
 Trezise: Donald John, Brighton.
 Trinder: Gerald Ernest, Bristol.
 Tsang: Nai Pok.
 Walker: Leslie James.
 Wall: David Terrence, Dipl.Arch.(Northern Polytechnic).
 Wallace: Ronald Gordon, Dublin.
 Wann: James, Penicuik.
 Ward: Marshall Henry, Preston.
 Warren: John Cecil Turnbull, B.Arch. (Dunelm), Horsham.
 Watson: John David, B.A.(Arch.)(Lond.).
 Weir: Walter Donald, A.R.I.C.S., Weston-super-Mare.
 Wheately: Brian, Birmingham.
 Wheatley: John Robert Glamis, Southend-on-Sea.
 Wilkinson: Leslie James Arthur, High Ongar.
 Willetts: Gilbert George John, Halesowen.
 Wingfield: Alan Arthur, Worthing.
 Wood: Arthur William, D.A.(Edin.), Edinburgh.
 Wood: Hubert Douglas, Bingley.
 Woolstone: Brian Simon Joseph, Manchester.
 Yawitch: Boris, B.Arch.(Rand.), Johannesburg, S. Africa.

ELECTION: 7 APRIL 1959

An election of candidates for membership will take place on 7 April 1959. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday, 16 March 1959.

The names following the applicant's address are those of his proposers.

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Alexander: Robert Roger, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), 27 Braehead Drive, Linlithgow, West Lothian. Prof. R. H. Matthew, W. H. Kininmonth, Esme Gordon.

Archer: Ivan Alfred, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), 72 Bitham Lane, Streton, Burton-on-Trent, Staffs. A. Douglas Jones, F. W. B. Charles, F. H. Crossley.

Bacon: John William, (Special Final), 'Ottery', 3 Cissbury Road, Ferring, Nr. Worthing, Sussex. Raglan Squire, G. J. Cuzens, and applying for nomination by the Council under Bye-law 3(d).

Baker: Geoffrey Howard, Dip.Arch.(Manchester), (Victoria Univ., Manchester: Sch. of Arch.), 4 Senior Avenue, Blackpool. Prof. R. A. Cordingley, E. S. Benson, Dr. W. A. Singleton.

Becker: Ian Harold Scott, M.C.D., B.Arch. (L'pool), A.M.T.P.I. (Liverpool Sch. of Arch. Univ. of Liverpool), Hill View, Samuelston Cross Roads, Haddington, East Lothian. Prof. R. Gardner-Medwin and applying for nomination by the Council under Bye-law 3(d).

Berrett: Brian, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), 7 Harcourt, Willenhall Wood, Coventry. A. Douglas Jones, Arthur Ling, F. W. B. Charles.

Bigg: Allan Charles, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 14 Lennard Avenue, West Wickham, Kent. J. S. Walkden, George Coles, J. S. Foster.

Black: Robert Reid, D.A.(Dundee), (Dundee Coll. of Art: Sch. of Arch.), 9 Nevill Street, Arbroath, Angus. T. H. Thoms, A. F. S. Wright, W. S. Gauldie.

Bridger: Colin Gordon, Dip.Arch.(Manchester), (Victoria Univ., Manchester: Sch. of Arch.), 31a Hampstead Lane, Highgate, N.6. J. M. Easton, S. E. T. Cusdin, Sir Howard Robertson.

Bristow: John Alan, Dip.Arch.(Kingston), (Sch. of Arch., Kingston-upon-Thames: Dept. of Arch.), 16 Park Lane, Reigate, Surrey. J. M. Austin-Smith, Mrs. I. L. E. Austin-Smith, J. M. Grice.

Brookes: Brian, Dip.Arch.(U.C.L.), (Bartlett Sch. of Arch.: Univ. of London), 66 Cecil Road, Lancing, Sussex. Prof. H. O. Corflato, R. C. White-Cooper, Hubert Bennett.

Bruce: William, (Special Final), 'Crimond', Cortachy Road, Northmuir, Kirriemuir, Angus. W. S. Gauldie, A. F. S. Wright, T. H. Thoms.

Bunting: Brian, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), c/o Prof. Sir Leslie Martin, King's Mill, Great Shelford, Cambridge. J. S. Walkden, Prof. Sir Leslie Martin, Frank Risdon.

Burns: Ian Douglas, D.A.(Glas.), (Glasgow Sch. of Arch.), 19 Queen Street, Stirling, Scotland. Prof. W. J. Smith, E. S. Bell, T. S. Cordiner.

Burton: David Joseph, Dip.Arch.(Oxford), (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), Heathercroft, High Park Road, Broadstone, Dorset. Reginald Cave, L. M. Austin, David Booth.

Carroll: Kenith John, Dip.Arch.(Oxford), (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), Bowling Green Farm, Cirencester, Glos. Reginald Cave, Lieut.-Colonel G. W. H. Ryland, Lieut.-Colonel Eric Cole.

Carter: Henry Keith, B.A.(Arch.) (Manchester), (Victoria Univ., Manchester: Sch. of Arch.), 57 Belfield Lane, 'Spion Kop', Rochdale, Lancashire. Prof. R. A. Cordingley, E. S. Benson, Dr. W. A. Singleton.

Chadwick: James Harry, B.A.(Arch.) (Manchester), (Victoria Univ., Manchester: Sch. of Arch.), 12 Westbourne Grove, Withington, Manchester, 20. Prof. R. A. Cordingley, E. S. Benson, Dr. W. A. Singleton.

Collis: Robert Harvey, A.A.Dipl.(Arch.Assoc. (London) Sch. of Arch.), 38 Merland Rise, Tattenham Corner, Epsom Downs, Surrey. Arthur Korn, Hubert Bennett, David Jenkin.

Cook: Harold Arthur, (Special Final), 232 Northumberland Avenue, Welling, Kent. Applying for nomination by the Council under Bye-law 3(d).

Crawford: Ian William, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), 35 Wilnecote Grove, Perry Barr, Birmingham 22b. D. E. E. Gibson, A. G. Sheppard Fidler, A. Douglas Jones.

Crowe: Philip Norman, Dipl.Arch.(Leeds), (Leeds Sch. of Arch.), 51 North Park Avenue, Leeds 8. F. Chippindale, D. A. Fowler and applying for nomination by the Council under Bye-law 3(d).

Davies: Ceri, Dip.Arch.(Cardiff), (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 3 East View Terrace, Barry, Glamorgan. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

de Souza: Peter Marcel, B.A.(Cantab.), A.A. Dipl. (Arch.Assoc.(London) Sch. of Arch.), 21 Denning Road, Hampstead, N.W.3. W. P. Dyson, Arthur Korn, C. G. Stillman.

Dudhill: Peter, Dip.Arch.(Leics.), (Leicester Coll. of Art and Tech. Sch. of Arch.), 27 Ashdown Avenue, Leicester. T. W. Haird, R. J. Howrie, S. Penn Smith.

Fenton: Roy Malcolm, Dipl.Arch.(Hull), (Sch. of Arch. Regional Coll. of Art, Hull), 85 Hathersage Road, Hull. J. Konrad, W. B. Wheatley, H. D. Priestman.

Fielding: Derek Wainwright, M.C.D., B.Arch. (L'pool), (Liverpool Sch. of Arch., Univ. of Liverpool), 'Belmont', Oldham Road, Grasscroft, Oldham. Prof. R. Gardner-Medwin, Dr. Ronald Bradbury, F. J. M. Ormrod.

Fisher: William John, A.A.Dipl.(Arch.Assoc. (London): Sch. of Arch.), No. 8, Commerce House, 258-260 Coldharbour Lane, S.W.9. E. H. Firmin, Arthur Korn, Harry Moncrieff.

Frishman: Martin Julius, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 6 Bentinck Street, W.1. J. S. Walkden, H. W. Rosenthal, J. S. Foster.

Grant: John Cameron, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), 79 Dale Avenue, East Kilbride, Lanarkshire. J. R. McKay, Samuel McColl, T. H. Eley.

Gray: David Frederick, A.A.Dipl.(Arch.Assoc. (London): Sch. of Arch.), 98 Harwood Street, N.W.1. Leo De Syllas, Anthony Cox, M. H. Cooke-Yarborough.

Griffiths: John Anthony, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 23a Dartmouth Park Avenue, N.W.5. J. S. Walkden, Hidalgo Moya, Philip Powell.

Griffiths: Stephen Randle, Dip.Arch.(Manchester), (Victoria Univ., Manchester: Sch. of Arch.), 44 Latchmere Lane, Kingston, Surrey. Prof. R. A. Cordingley, E. S. Benson, James Melvin.

Haigh: Peter Robert, B.Arch.(Sydney), (Passed a qualifying exam. approved by the R.A.I.A.) Northern Aluminium Co. Ltd., Bush House, Aldwych, W.C.2. Alick Low and applying for nomination by the Council under Bye-law 3(d).

Hanson: David William, B.Arch.(L'pool), (Liverpool Sch. of Arch., Univ. of Liverpool), 9 Orrell Road, Wallasey, Cheshire. Prof. R. Gardner-Medwin, Dr. Ronald Bradbury, R. R. Young.

Hanson: John, (Final), 28 Granville Park, Lewisham, S.E.13. M. de Metz, A. H. Devereux, E. L. W. Davies.

Hartley: James Peter, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), 'Southcliffe', 63 Burton Road, Burton-upon-Trent. A. Douglas Jones, Reginald Edmonds, F. W. B. Charles.

Heal: David Corsellis, (Arch.Assoc.(London): Sch. of Arch.), 4 St. George's Road, St. Margarets, Twickenham, Middx. Arthur Korn, Anthony Cox, M. Patrick.

Hives: John Graham, Dip.Arch.(Oxford), (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), 46 Queens Road, Reading, Berks. Reginald Cave, D. H. McMorran, Hubert Bennett.

Holmes: John, Dipl.Arch.(Kingston), (Sch. of Art, Kingston-upon-Thames: Dept. of Arch.), 15 Ludlow Road, Guildford, Surrey. J. W. A. Cubitt and applying for nomination by the Council under Bye-law 3(d).

Johnson: Frederick Clive, B.Arch.(Wales), (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 'Brynnonen', 45 Danygraig, Pantmawr, Whitchurch, Cardiff. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

Johnston: Adam, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), 3 Cope Lane, Port Seton, East Lothian, Scotland. Esme Gordon, W. G. Dey, and applying for nomination by the Council under Bye-law 3(d).

Lane: John Armstrong, Dip.Arch.(Leics.), (Leicester Coll. of Art and Tech. Sch. of Arch.),

'Redruth', 1 Ridgway Road, Knighton, Leicester. James Melvin, T. A. Collins, S. Penn Smith.

Leslie: David James, D.A.(Glas.), (Glasgow Sch. of Arch.), 31 Lyndhurst Gardens, Glasgow, N.W. F. R. Wylie, G. F. Shanks, Walter Underwood.

MacGregor: John Seyton Kofi, (Sch. of Art, Kingston-upon-Thames, Dept. of Arch.), Kingston School of Art, Dept. of Architecture, Knights Park, Kingston-upon-Thames. Applying for nomination by the Council under Bye-law 3(d).

McGregor Williams: Roger James, M.A.(Cantab.), Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 4 The Chestnuts, Chislehurst, Kent. J. S. Walkden, W. P. Dyson, J. S. Foster.

Manners: Keith Allen, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 18 Worthington House, Myddelton Passage, E.C.1. Peter Chamberlin, David Jenkin, J. S. Walkden.

Marsden, (Miss) Anne Monica, B.Arch.(Wales), (Welsh Sch. of Arch. The Tech. Coll., Cardiff), Greenmantle, Clinton Road, Penarth, Glam. Sir Percy Thomas, Dr. T. A. Lloyd, S. E. T. Cusdin.

Matthews: Vivian, Dip.Arch.(Cardiff), (Welsh Sch. of Arch., The Tech. Coll., Cardiff), 36, Brynhyfryd, Cwmaman, Aberdare, Glam. Lewis John, George Ford, L. G. Pargiter.

Middleton: Francis David, (Final), 42 Swinley Gardens, Newcastle upon Tyne, S. E. D. Mills, S. W. Milburn, F. Fielden.

Morgans: David Richard, B.Arch.(Wales), (Welsh Sch. of Arch., The Tech. Coll., Cardiff), 56 Clydach Road, Morriston, Swansea, Glamorgan. Sir Percy Thomas, D. J. Howells, Lewis John.

Pearce: Norman Glyn Avery, Dip.Arch.(Cardiff), (Welsh Sch. of Arch., The Tech. Coll., Cardiff), 4, Bradenham Place, Penarth, Glam. Lewis John, Frankland Park, T. A. Eaton.

Phillip: David, D.A.(Glas.), (Glasgow Sch. of Arch.), 'Byways', 10 Willowbath Lane, Wirsborough, Derbyshire. Prof. W. J. Smith, A. G. Jury, A. D. Cordiner.

Phillips: John James, Dip.Arch.(Cardiff), (Welsh Sch. of Arch., The Tech. Coll., Cardiff), 129 Grand Avenue, Ely, Cardiff, Glam. Dr. T. A. Lloyd, Leonard Rigby, Lewis John.

Powell: Thomas Kenneth, Dip.Arch.(Cardiff), (Welsh Sch. of Arch., The Tech. Coll., Cardiff), 'Santa Barbara', 4 Dan-y-Graig, Pantmawr, Whitchurch, Glam. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

Price: Cedric John, B.A.(Cantab.), A.A.Dipl. (Arch.Assoc. (London) Sch. of Arch.), 140a Haverstock Hill, N.W.3. E. M. Fry, Miss J. B. Drew, D. L. Lasdun.

Purvis: Ralph Francis Malcolm, Dip.Arch. (Nottm.), (Nottingham Sch. of Arch.), 32 London Road, Newark, Notts. Applying for nomination by the Council under Bye-law 3(d).

Russell: Trevor Claude Charles, (Special Final), Bridgend House, Bridgend, Perth, Scotland. D. D. Jack, A. F. S. Wright, K. M. Young.

Salt: Norman Leslie, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), 21 King Street, Bradley, Bilston, Staffs. A. Douglas Jones, F. W. B. Charles, A. G. Sheppard Fidler.

Sayer: Francis Brian, Dip.Arch.(Sheffield), (Univ. of Sheffield, Dept. of Arch.), 185 Greenbank Road, Darlington, Co. Durham. Prof. Stephen Welsh, H. B. Leighton, J. P. Rudd.

Slater, (Miss) Ann, Dip.Arch.(Sheffield), (Univ. of Sheffield, Dept. of Arch.), 64 Osborne Road, Sheffield 11. Prof. Stephen Welsh, S. E. T. Cusdin, Sir Howard Robertson.

Smith: Kenneth Pickard, (Final), 96 Emscote Road, Warwick. H. Wilson-Wood, D. J. Oliver, and applying for nomination by the Council under Bye-law 3(d).

Southern: Thomas Gerald, B.Arch.(Dunelm), (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 27 Salisbury Gardens, Jesmond, Newcastle upon Tyne. Prof. W. B. Edwards, F. Fielden, Bruce Allsopp.

Stedman: Geoffrey George, Dip.Arch.(Kingston), (Sch. of Art, Kingston-upon-Thames, Dept. of Arch.), 27 Greenmeads, Woking, Surrey. F. T. Orman, Frank Risdon, R. D. Scott.

Stewart: James Henderson, B.Arch.(L'pool), (Liverpool Sch. of Arch. Univ. of Liverpool), 84 Westbank Road, Devonshire Park, Birkenhead, Cheshire. Prof. R. Gardner-Medwin, Dr. Ronald Bradbury, R. R. Young.

Tan: Soo Seng, B.A.(Arch.) (Sheffield), (Univ. of Sheffield, Dept. of Arch.), 20 Linden Gardens,

W.2. Prof. Stephen Welsh, H. B. Leighton, Prof. John Needham.

Thompson: Alan Michael, (Final), 26 Church Road, Kingswood, Bristol. T. H. B. Burroughs, A. F. French, E. H. Button.

Thompson: Derek Peter, Dipl.Arch.(Leeds), (Leeds Sch. of Arch.), Midland Bank Chambers, Queens Road, Buckhurst Hill, Essex. F. Chippindale, A. J. Power, H. D. Matthew.

Thorne: John Bryan, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), 16 Mayfield Road, Moseley, Birmingham 13. A. Douglas Jones, F. W. B. Charles, Herbert Jackson.

Trevor: Stanley, B.Arch.(Rand), (Passed a qualifying exam. approved by the I.S.A.A.), 8 Queen Anne Street, W.1. C. A. Lucas, J. F. Howes, F. L. Jackman.

Trower: Roger John, Dip.Arch.(Notm.), (Nottingham Sch. of Arch.), 246 Unthank Road, Norwich, Norfolk. C. J. Tomkins, H. C. Boardman, E. W. B. Scott.

Turtle: (Miss) Sylvia Maude, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 2 Earl's Crescent, Harrow, Middx. J. S. Walkden, David Jenkin, J. S. Foster.

Vis: Cornelis Matheus, Dipl.Arch.(Hull), (Sch. of Arch., Regional Coll. of Art, Hull), St. Brelade's, Newgate, Cottingham, E. Yorks. J. Konrad, Allanson Hick, H. D. Priestman.

Walker: Christopher John, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 24 Granville Park, S.E.13. Basil Spence, J. S. Walkden, H. W. Rosenthal.

Wallace: Lancelot Ferguson, Dip.Arch.(Sheffield), (Univ. of Sheffield, Dept. of Arch.), 1 Lorne Villas, Carlton Road, Worthington, Cumberland. Prof. John Needham, Prof. Stephen Welsh, Leonard Rigby.

Whitton: John Irwin, Dipl.Arch.(Hull), (Sch. of Arch., Regional Coll. of Art, Hull), 9 Lodge Street, Holderness Road, Hull. J. Konrad, C. W. Neil, H. D. Priestman.

Wilson (Miss) Corinne Gillian, B.A.(Arch.), (London), (Bartlett Sch. of Arch., Univ. of London), 46 Marlborough Mansions, N.W.6. Prof. H. O. Corfiato, Philip Powell, Hidalgo Moya.

ELECTION: 16 JUNE 1959

An election of candidates for membership will take place on 16 June 1959. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Friday, 29 May 1959.

The names following the applicant's address are those of his proposers.

AS ASSOCIATES (28)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Avis: David John, A.A.Dipl.(Arch.Assoc. (London): Sch. of Arch.), c/o The Nigerian College of Technology, Zaria, Nigeria. H. G. Goddard, Arthur Korn, Prof. H. O. Corfiato.

Batliwala: Daraius Minocher, (Final), 30 Sleater Road, Bombay 7, India. Prof. S. S. Reuben, S. H. Parekar, H. N. Dallas.

Bawa: Geoffrey, M.A.(Cantab.), A.A.Dipl.(Arch.Assoc.), (London), (Sch. of Arch.), c/o Messrs. Edwards, Reid & Begg, Prince Street, Fort, Colombo, Ceylon. J. C. Nilgria, H. E. Gonsal, N. Wynne-Jones.

Brooks: John Raymond, B.A.Arch.(Lond.), (Bartlett Sch. of Arch., Univ. of London), c/o Messrs. Hughes and Polkinghorne, P.O. Box 2693, Nairobi, Kenya, East Africa. R. W. J. Polkinghorne, Mrs. E. D. Hughes, G. B. E. Norburn.

Butcher: Raymond Dennis, Dip.Arch.(C.T.), (passed a qualifying exam. approved by the I.S.A.A.), 'Simu le Domba', Southam Road, Greystone Park 4, P.O., Borrowdale, Salisbury, Southern Rhodesia. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(d).

Chan: Edwin Chin Tan, B.Arch.(N.S.W. Univ. of Technology), (passed a qualifying exam. approved by the R.A.I.A.), c/o Chan Kui Chuan, Esq., Sze Hai Tong Building, Phillip Street,

Singapore 1, Malaya. Prof. F. E. Towndrow, R. L. Little, P. J. Gordon.

Deobhakta: Madhav Ganesh, (Final), 3-34 Government Quarters, Nr. Bengal Chemical, Worli, Bombay, 18, India. Prof. S. S. Reuben, H. N. Dallas, A. S. Patil.

Dubash: Minoo Jamsheji, (Final), 631 Meher Villa, Joshi Road, Parsee Colony, Dadar, Bombay-14, India. Prof. S. S. Reuben, S. H. Parekar, H. N. Dallas.

Foo: Paul Yoon Sen, B.Arch.(Melbourne) (passed a qualifying exam. approved by the R.A.I.A.), 61 Kimberley Street, Penang, Malaya. Prof. B. B. Lewis, R. G. Parker, Mrs. Hilary Lewis.

Francis: John Wakefield, Dipl.Arch.(Oxford), (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), Messrs. H. O. Corfiato and Partners, c/o Nigerian College of Technology, Zaria, N. Nigeria, W. Africa. Reginald Cave, Guy North, Charles Oliver.

Gill: Edgar Leonard, B.Arch.(Rand) (passed a qualifying exam. approved by the I.S.A.A.), 603 Union Castle Building, Loveday Street, Johannesburg, S. Africa. Applying for nomination by the Council under Bye-law 3(d).

Gunasekara: Valentine Kumarasiri, A.A.Dipl.(Arch.Assoc.(London), Sch. of Arch.), c/o Messrs. Edwards, Reid & Begg, Prince Buildings, Prince Street, Colombo, 1, Ceylon. J. C. Nilgria, N. Wynne-Jones, H. E. Gonsal.

Hadkar: Bhachandra Ganesh, (Final), 127 Dwarka Bhuvan, 5th Lane, Hindu Colony, Dadar, Bombay-14, India. Prof. S. S. Reuben, S. H. Parekar, A. S. Patil.

Karani: Pranlal Prabhudas, (Final), Kuber Kunj, Karani Lane, Ghatkopar, Bombay 39. Prof. S. S. Reuben, S. H. Parekar, S. J. Narwekar.

Karekar: Shantaram Krishnaji, Dipl.Arch.(U.C.L.), (Bartlett Sch. of Arch., Univ. of London), 44 Kumara Park, West Extension, Bangalore, 3, India. G. B. Mhatre, S. H. Parekar, H. N. Dallas.

Lawrence: Neville Treleven, (Final), P.O. Box 1024, Mombasa, Kenya, East Africa. H. D. Archer, R. Q. Scammell, C. J. Crowe.

Lynn-Jones: David Musson, Dip.Arch.(Cardiff), (Welsh Sch. of Arch., The Tech. Coll., Cardiff), 16 McKinley Avenue, Jamestown, New York, U.S.A. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

Madan: Sharad Yeshwant, (Final), 225 Khetwadi Main Road, Bombay 4, India. G. B. Mhatre, A. S. Patil, H. N. Dallas.

Modinos: Alexander Fotis, D.A.(Glas.), (Glasgow Sch. of Arch.), 6 Aristides Street, Nicosia, Cyprus. Prof. W. J. Smith, A. D. Cordiner, A. G. Jury.

Naik: Chandrakant Prabhakar, (Final), Room No. 10, 39-49 Goregaonkar Wadi, Harischandra Goregaonkar Road, Gamdevi, Bombay 7, India. Prof. S. S. Reuben, G. B. Mhatre, H. N. Dallas.

Odeinde: Olufemi Abayomi, Dipl.Arch.(Hull), (Sch. of Arch., Regional Coll. of Art, Hull), c/o Ministry of Works and Transport, Secretariat, Ibadan, Nigeria. Alexander Potter, K. A. Begg, G. R. Stout.

Patki: Prabhakumar Gajanan, (Final), c/o Dr. (Mrs.) S. A. Kulkarni, M.B.B.S., Bedekar Sadan, N.C., Kelkar Road, Dadar, Bombay 28, India. Prof. S. S. Reuben, G. B. Mhatre, A. S. Patil.

Penkar: Jacob Menashe, (Special Final), Bungalows 42, Pratapguni, Baroda 2, India. Prof. S. S. Reuben, S. H. Parekar, H. N. Dallas.

Razdan: Narrendra Nath, B.Sc.(Delhi), (Final), Louisiana, Main Avenue, Santa Cruz (West), Bombay, India. J. S. Walkden, G. B. Mhatre, A. S. Patil.

Searr: Wilfrid Keith, (Special Final), c/o Public Works Department, Zomba, Nyasaland. C. N. Nettleton and applying for nomination by the Council under Bye-law 3(d).

Shalovsky: Gerald Harold, B.Arch.(C.T.) (passed a qualifying exam. approved by the I.S.A.A.), 10 Ninth Avenue, Stanbury Park, Salisbury, N.W.21, Southern Rhodesia. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(d).

Sidhaye: Jayant Gopal, (Final), c/o G. K. Sidhaye, Esq., Presidency Postmaster, Bombay 1, India. H. C. Inglis, Guy Morgan, S. Penn Smith.

Thomas: Arthur Frederick Meredith, (Final), P.O. Box 890, Nairobi, Kenya, East Africa. G. B. E. Norburn, C. J. Crowe, Gordon Ogilvie.

Members' Column

This column is reserved for notices of changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. T. D. W. Astorga, Dip.T.P.(Manchester) [A], has resigned his position as Principal Assistant Architect to the Birmingham Regional Hospital Board, in order to take up the appointment of Deputy Regional Architect to the Leeds Regional Hospital Board, Park Parade, Harrogate, Yorkshire.

Mr. Geoffrey Charles Fardell, M.B.E. [A], has been appointed County Architect of Hertfordshire in succession to **Mr. C. H. Aslin**, C.B.E., Past-President R.I.B.A., who retired in December 1958.

Mr. H. J. Whitfield Lewis, M.T.P.I. [A], Housing Architect to the London County Council, has been appointed County Architect of Middlesex in succession to **Mr. C. G. Stillman** [F]. This cancels the erroneous notice which appeared in this column in the February issue of the JOURNAL.

Mr. E. A. H. MacDonald [A] has been appointed Borough Architect and Director of Housing for Fulham.

Mr. Geoffrey H. Simpson [A] Group Architect with Messrs. Ericsson Telephones, Ltd., has been appointed Architect to the Production Engineering Research Association of Great Britain (P.E.R.A.), Melton Mowbray, Leicestershire.

PRACTICES AND PARTNERSHIPS

Mr. Lionel F. R. Coote [F] has taken **Mr. George Scrimgeour**, B.Arch.(C.T.), and **Mr. Michael Coote**, B.Arch.(C.T.) [A], into partnership, and will continue to practise at B.S.B. Building, 45 Manica Road, Salisbury, S. Rhodesia, as Coote, Scrimgeour and Coote.

Owing to continued ill-health, **Mr. L. A. Culliford**, F.R.I.C.S. [F], is retiring from the firm of **L. A. Culliford and Partners**. The practice will be continued by the remaining partners, **Mr. L. A. Chackett**, F.R.I.C.S. [F], **Mr. Richard Henniker**, M.A.(Cantab.) [F], and **Mr. J. W. W. Lyde** [A].

Mr. James N. Cunningham [A] is now in private practice at 187 Nithhill Road, Glasgow, S.W.3 (Barrhead 2420), where he will be pleased to receive trade literature.

Mr. Alun Jones [A] has taken **Mr. J. R. Allerton** [A] into partnership, and the practice will continue from 39 High Street, Bromley, Kent (Ravensbourne 0472), under the style of **Alun Jones and Allerton**.

The partnership between **Mr. Ian Stewart Kaye** [A] and **Mr. Stanley Poole** [A] has been dissolved by mutual consent. Mr. Poole will now practise with **Mr. I. T. Brand** [A] under the style of **Stanley Poole and Associates** at 60 Castle Street, Edinburgh.

Mr. William H. Kininmonth, R.S.A. [F], of the firm of **Rowand Anderson, Kininmonth and Paul**, of 16 Rutland Square, Edinburgh, has taken **Mr. Ian C. Gordon** [A] into partnership. The firm of **Rowand Anderson, Kininmonth and Paul**, at Forres, in which Mr. Kininmonth is in partnership with **Mr. Hamish E. Burden**, A.M.T.P.I. [A], will continue to operate from Forres House, Forres, Morayshire, as before, under the existing partnership arrangement.

Messrs. Mayell, Hart and Partners [A] have taken **Mrs. M. J. A. Esden** (née Goodwin) Dip.Arch. (The Polytechnic) [A], into associate partnership.

Messrs. John Noel and Associates [A] have commenced private practice at Salubrious Passage, Wind Street, Swansea (Swansea 53238).

Mr. Malcolm H. Peck [A] has taken Mr. Stanley L. Roberts [A] into partnership. The practice will be continued from 15 Friary Street, Guildford, under the name of **Malcolm Peck, Roberts and Associates**.

Mr. Frank Shaw [A] has become an associate partner in the firm of **Mortimer Partners [AA]** of Ainderby Hall, Ainderby Steeple, Northallerton, North Yorkshire (Northallerton 403 and 450).

Messrs. Shepherd, Fowler and Marshall (S. E. Shepherd, F.R.I.C.S. [L]), have, following the death of Mr. H. B. S. Gibbs [F], taken over the practice of Gibbs and Gibbs. The name of the firm will remain unchanged, together with the address: 15 St James' Row, Sheffield, 1.

Mr. Kenneth J. Steel [A] has taken Mr. John Hadley Coleman [A] into partnership under the style of **Kenneth Steel and Hadley Coleman** at 7 The Crescent, Taunton, Somerset (Taunton 7020).

Miss June E. Sutcliffe [A] has commenced practice at The Carlisle Journal Offices, 60 English Street, Carlisle, where she will be pleased to receive trade catalogues, etc.

Mr. Ronald C. Wilson [A] has started private practice at 'Yangwood', Caenshill Road, Weybridge, Surrey (Weybridge 5840), where he will be pleased to receive trade literature, etc.

CHANGES OF ADDRESS

Mr. M. J. Bacon [A] has changed his address to Box 369, Cooksville, Ontario, Canada.

Mr. David C. Branch [A] has changed his private address to 20 Hallgate, Blackheath Park, Blackheath, London, S.E.3.

Mr. J. L. Buttery [A] has changed his address to 'West Bank', Lowerfold, Shawclough Road, Rochdale, Lancs.

Mr. David Cathels [A] has changed his address to 214 Bannerdale Road, Sheffield, 7.

Mr. G. H. B. Chantrey [A] has transferred his practice to 4 Queen Street, Newcastle-under-Lyme, Staffs (Newcastle Staffs 65550).

Mr. H. H. Clark [F] has moved to 3-4 Clement's Inn, Strand, London, W.C.2. (Chancery 3222-3).

The address of Miss H. Margaret Cowbourne [A], who is employed as an Assistant City Planner with the City of Toronto Planning Board, is c/o Taylor, 30 Rosevear Avenue, Toronto 13, Ontario, Canada.

Mr. William Dickson [A16073], has changed his address to 198 Ocean House Road, Cape Elizabeth, Maine, U.S.A.

Messrs. Russell Diplock Associates [A] have changed their address to 235 Vauxhall Bridge Road, Westminster, London, S.W.1 (Tate Gallery 4040 and 0771-2).

Mrs. Pamela Egeland-Jensen [A] has changed her address to 183 Topsham Road, Exeter, Devon.

Mr. J. F. Fortune [A] has changed his address to 9A Dale Grove, North Finchley, London, N.12. (Hillside 9464).

Mr. Kenneth F. Haynes [A] has changed his address to Whitehall Hotel, 46 Third Street, Central Avenue, Salisbury, S. Rhodesia.

Mr. W. A. L. Hopkins [A] has changed his address to 10 Elstree Hill, Bromley, Kent.

Mr. Raymond J. O. Jones [A] and Mrs. Valerie H. Jones [Student] have changed their address to H.Q., P.W.D., Enugu, Eastern Region, Nigeria.

Messrs. Manning and Clamp [AA] have changed the address of their Grimsby office to

1 Old Market Place, Grimsby, Lincs. (Grimsby 57955), where they will be pleased to receive trade catalogues.

Mr. John W. M. Mansel [F] has changed his office address to 19 Elm Park Road, Chelsea, London, S.W.3. (Flaxman 4033).

Mr. R. E. Melhuish [A] has changed his address to 'Ramblers', Friday Street, Wamham, Sussex (Horsham 5605).

Mr. Arthur J. Miller, M.C.D. [A], has moved his office to 25 Queen Victoria Street, Reading, where he will be pleased to receive trade catalogues.

Mr. Christopher Mitchell [A] has changed his address to c/o Oxford Regional Hospital Board, 43 Banbury Road, Oxford.

Mr. John D. Morgan [A] has changed his private address to 17 Thornton Way, London, N.W.11.

Messrs. John D. Morgan and David C. Branch [AA] have changed their address to 8-16 Great New Street, London, E.C.4, and have also taken new premises at 119 The Promenade, Cheltenham, Gloucestershire.

Messrs. Mortimer Partners (R. S. Mortimer [A], Elizabeth G. Mortimer [A] and Frank Shaw [A]) have established their main office at Ainderby Hall, Ainderby Steeple, Northallerton, North Yorkshire (Northallerton 403 and 450).

Mrs. Elizabeth Mortimer [A] has changed her private address to 'The House in the Orchard', Ainderby Hall Park, Ainderby Steeple, Northallerton.

Messrs. Munce and Kennedy (J. F. Munce [A]) have now established an office at 36 Seymour Street, Marble Arch, London, W.1. (Paddington 5882), where they will be pleased to receive trade catalogues.

Mr. Richard S. Nickson [F] has reopened a branch office in the Liverpool area in conjunction with Mr. T. C. Ribchester, at 10 Sunnyfields, Ormskirk, Lancashire (Ormskirk 2698).

Mr. Hugh G. S. Peacock [A] has changed his address to 1720 Mount Curve Avenue, Minneapolis 5, Minnesota, U.S.A.

Mr. Arnold Plackett [Retd. L] requests that as he has retired from practice and has changed his address, his name be removed from all mailing lists.

Mr. Frank Shaw [A] has changed his private address to 'Tanys Dell', Ainderby Hall Park, Ainderby Steeple, Northallerton (Northallerton 2890.)

Messrs. Simister and Sutcliffe (John Sutcliffe [A]) have transferred their office to Retiro Chambers, Waterloo Street, Oldham, Lancs. (Main 4324).

Mr. Bernard B. West [A] has changed his address and telephone number to 37 Cardington Road, Bedford (Bedford 66706).

Messrs. Winter and Pickering [A/L] have changed their address and telephone number to St. Andrew's House, 32 Holborn Viaduct, London, E.C.1 (Fleet Street 2575).

MISCELLANEOUS

Mr. William H. Gill, A.M.T.P.I. [F], of 63 Cromwell Road, South Kensington, London, S.W.7, has been called to the Bar by Gray's Inn.

Associate collecting material in preparation for writing a monograph about Thomas Rickman, F.S.A., Architect, 1776-1841, would be most grateful for any information. If anyone is in possession of drawings, letters, etc., and would kindly allow him to examine and copy them, the greatest care would be taken in the process. Box 24, c/o Secretary, R.I.B.A.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate (37) would welcome the opportunity to discuss with any principal the prospect of an ultimate partnership or purchase of the practice on gradual retirement. Member is keen and energetic and has had responsible and varied experience both in the U.K. and overseas. Opportunities existing in the southern counties would be particularly welcome but any suggestion would be considered. Box 20, c/o Secretary, R.I.B.A.

Associate with considerable and varied experience seeks responsible position in London or the Home Counties with a view to partnership. Some capital available. Box 25, c/o Secretary, R.I.B.A.

Fellow with a busy well-established practice in the Midlands offers a junior partnership to an Associate with good connections. Box 28, c/o Secretary, R.I.B.A.

Young partner required for Norwich practice. Must have knowledge of traditional work as well as modern. Small London branch office just opening and interesting work coming in. Must be absolute enthusiast and ready to work long hours, otherwise do not reply. Box 29, c/o Secretary, R.I.B.A.

Associate (52), with own small but busy practice in north Surrey, wishes to meet another member having preferably own practice or at least some connections with a view to amalgamation or partnership. Box 30, c/o Secretary, R.I.B.A.

WANTED AND FOR SALE

For Sale. Bound copies of the R.I.B.A. JOURNAL, Volumes 58 and 59 (buckram bound) and Volumes 60, 61, 62, 63 and 64 (paper bound). Box 26, c/o Secretary, R.I.B.A.

Wanted: *The Development of English Building Construction*, by C. F. Innocent. For Sale: *Building Specifications*, by T. Sumner Smith (Hutchinson 1946); *Academy Architecture 1929* (Batsford). Box 27, c/o Secretary, R.I.B.A.

ACCOMMODATION

Offices to let in London, W.1. area, particularly suitable for architects. Two large well-lit drawing offices with own toilet facilities. Box 12, c/o Secretary, R.I.B.A.

The Royal Institute of British Architects, as a body, is not responsible for statements made or opinions expressed in the JOURNAL.



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In Rain, Frost or Snow Driven taper joints give Key an immediate advantage over cement-jointed rigid pipes, which cannot normally be laid in waterlogged trenches. Runs can be pre-fabricated at ground level, lowered into prepared trenches and tested immediately.

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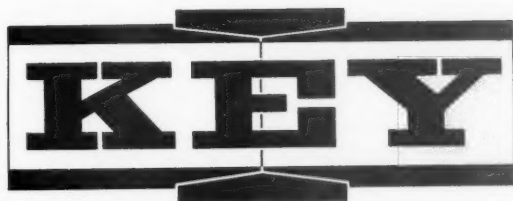
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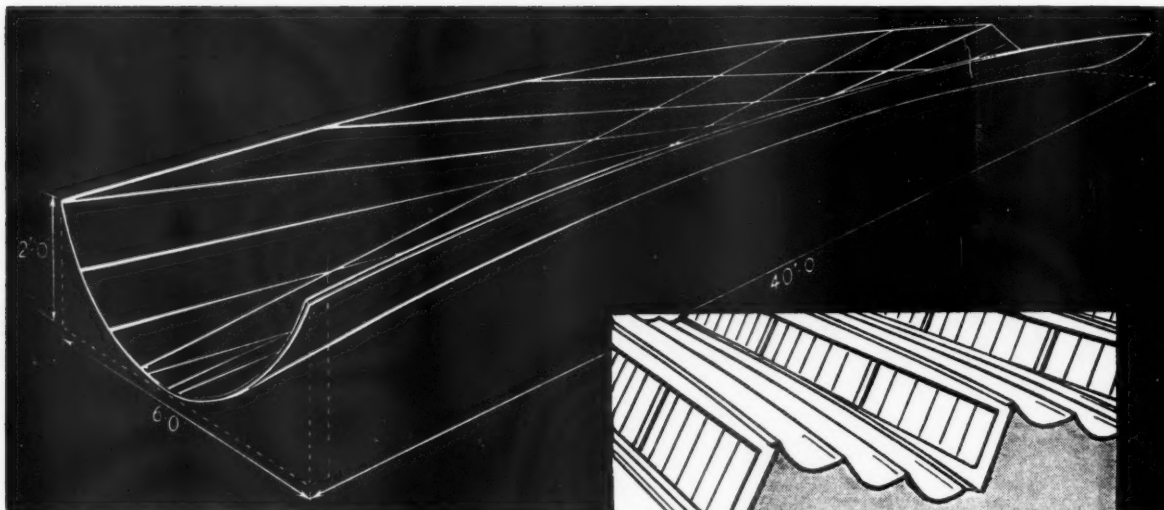
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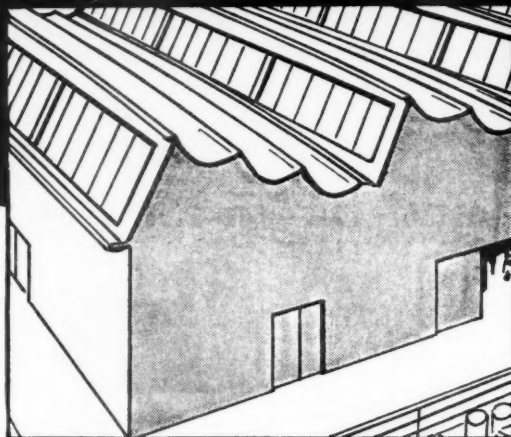
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'Hyperboloid of Revolution' with graphic construction and lines giving definition of surface.

The 'Hyperboloid of Revolution' is one of the forms in which pre-cast concrete roof sections can be employed. The pre-stressing steel is positioned in straight lines in a doubly curving shell, giving great strength with maximum economy in material.

Roof sections can be pre-cast in lengths up to 60 ft., transported to site and positioned by crane. This eliminates expensive shuttering, concrete mixing on site and casting members in situ. The inset shows how pre-cast units could be used for a north-light factory roof. The Design Department of G.K.N. Reinforcements Ltd. with drawing offices covering England, Scotland



and Wales, provides a complete service to architects and engineers concerned with the planning and design of every type of reinforced and pre-stressed concrete structure. The Design Department submits complete plans, with advice on the most effective and most economical use of steel.

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"It seems too versatile for words. It's a Thermal and Acoustic Insulant, rotproof and vermin-proof, fire-resistant, prevents condensation, resists vibration... anything else?"

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"I understand that Sprayed 'Limpet' Asbestos has two insulating properties?"

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On the contrary. Asbestos is chemically inert. It is rotproof, verminproof and undamaged by water. Condensation is diffused preventing dripping and allowing for speedy re-evaporation to the atmosphere from the warm surface of the coating.

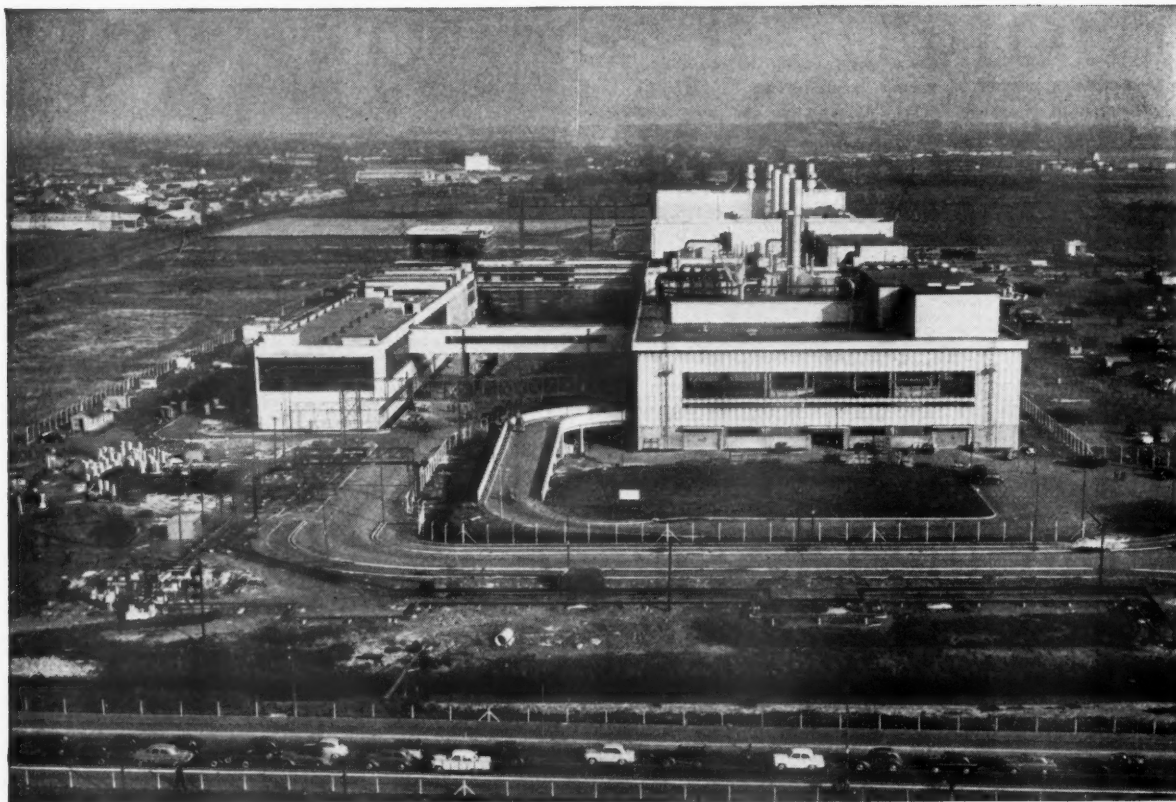
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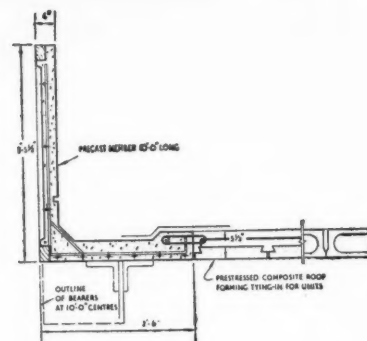
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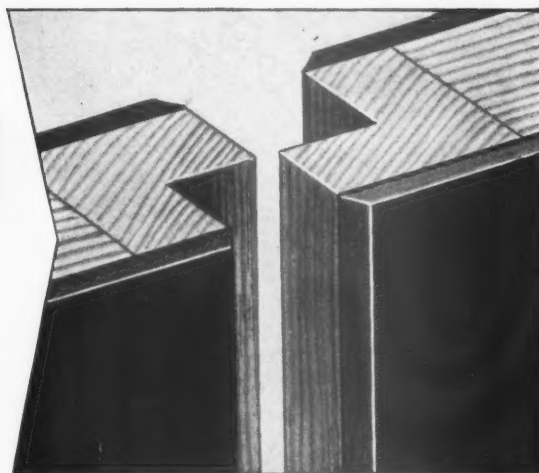
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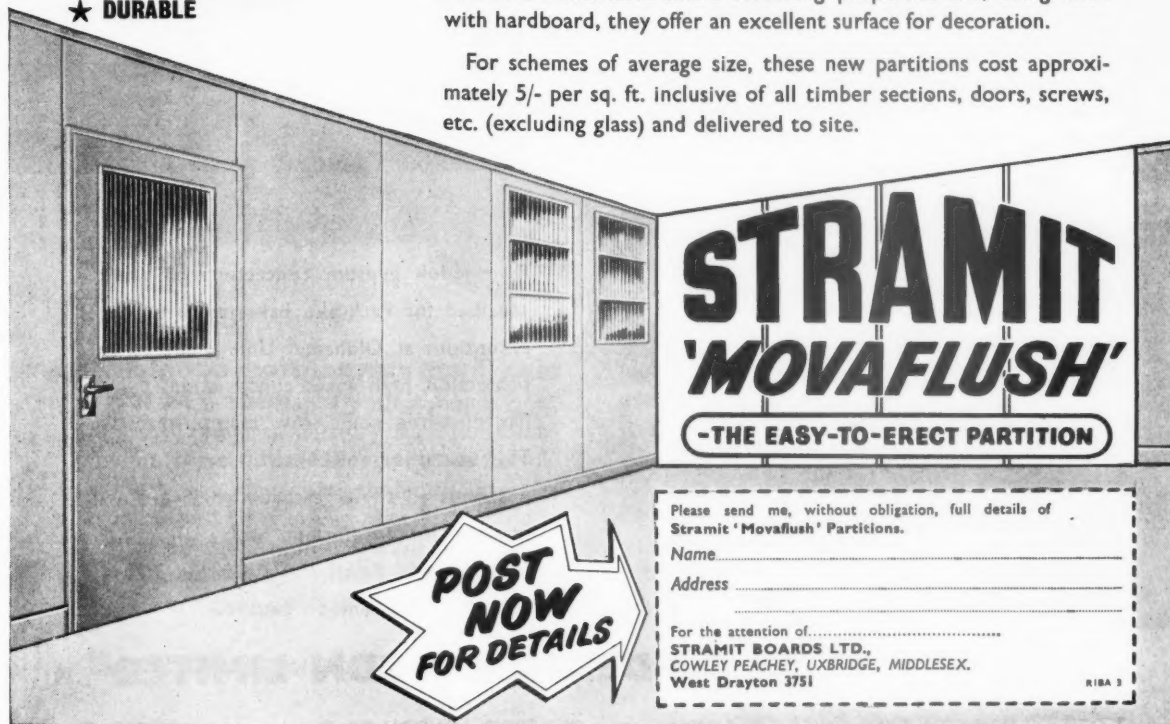


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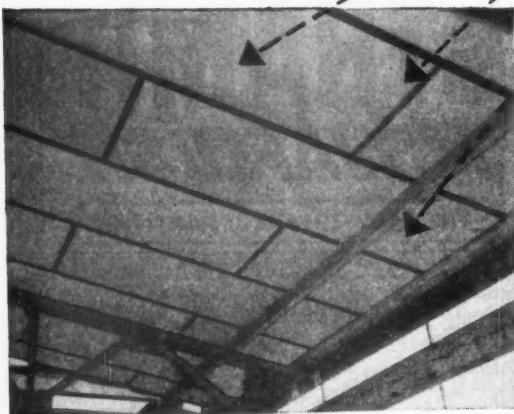
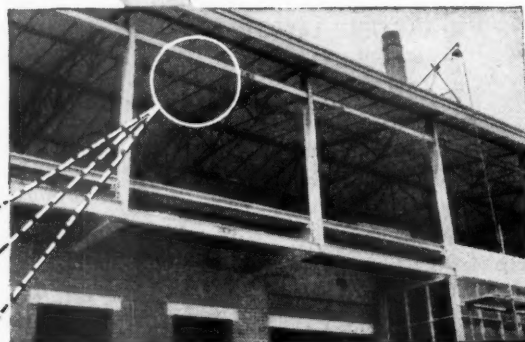


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'Ah, good morning, my man!' said Baron Rabbit. 'I want to buy a pipe.'

'Yes, your excellency,' said the tobacconist respectfully. 'We have some fine old briars, or perhaps a meerschaum, or a clay pipe - but O no, your worship wouldn't want anything so insignificant as that -'

'Insignificant?' cried the Baron. 'Clay pipes are glorious! Salt glazed clay is well-

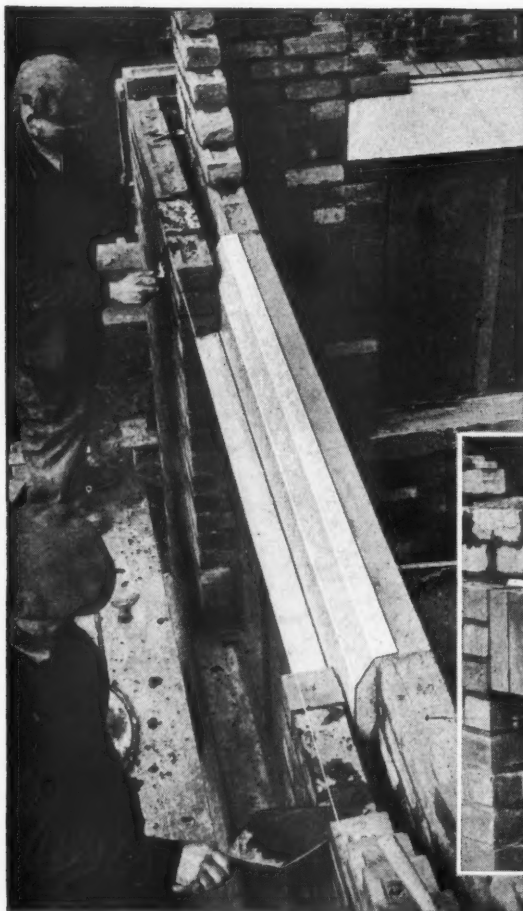
nigh impervious! It's acid-resistant! Immune to moulds and fungus! Can't be scratched by sand or grit! Copes with all kinds of effluents for centuries on end!'

'Yessir, yessir!' said the tobacconist. 'Will you take your clay pipe or shall I send it?'

'Keep it for now,' said the Baron. 'I'll send my butler down to collect it!'

Salt Glazed Clay Pipes - for drainage, for ever

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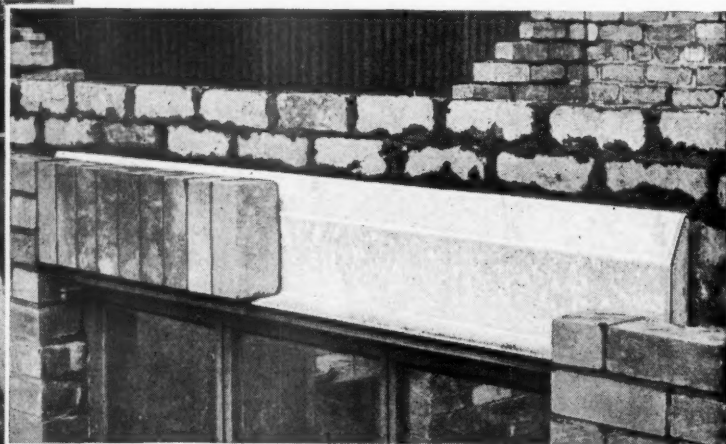
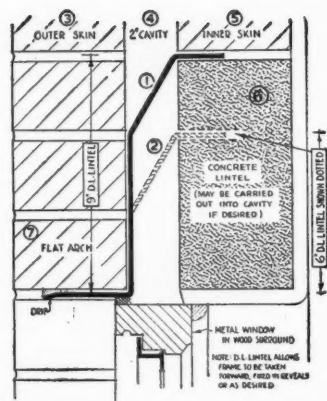


SECTION SHOWING TYPICAL DETAIL

- (1) 9 in. Dorman Long Lintel
- (2) 6 in. Dorman Long Lintel (shown dotted)
- (3) Outer skin
- (4) Cavity
- (5) Inner skin
- (6) Inside concrete lintel (carried out into cavity if so desired)
- (7) Flat arch

The wide 'turn-in' of the Dorman Long Lintel allows the cavity to be varied from 2 in. to 2½ in. in width.

Patent No. 694214



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Comes on site to required length ready to fix.

Large saving in site labour costs.

Cannot be damaged in cavity cleaning.

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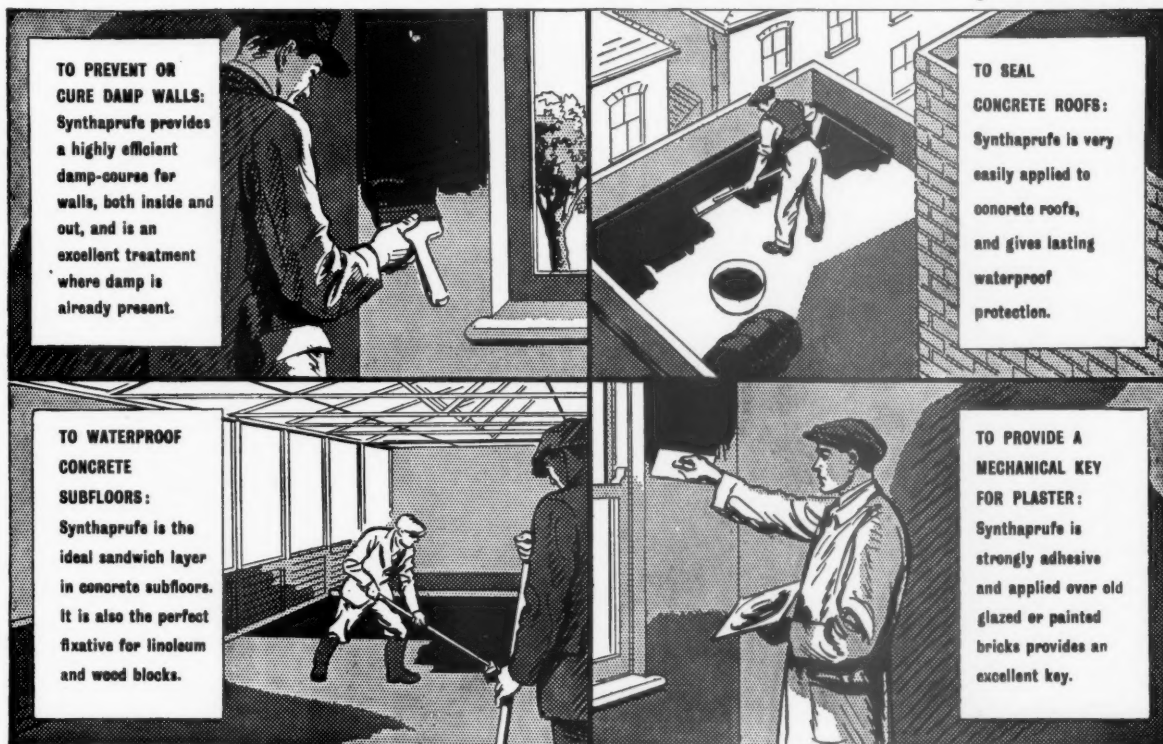
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When Synthaprufe is applied to inside walls it may be finished in distemper, wall-paper or emulsion paint; full instructions will be furnished by the manufacturers.

Synthaprufe offers the architect, builder, and engineer a waterproofing and jointing material of unusual efficiency and versatility, ready to use and easily applied.

Some special uses

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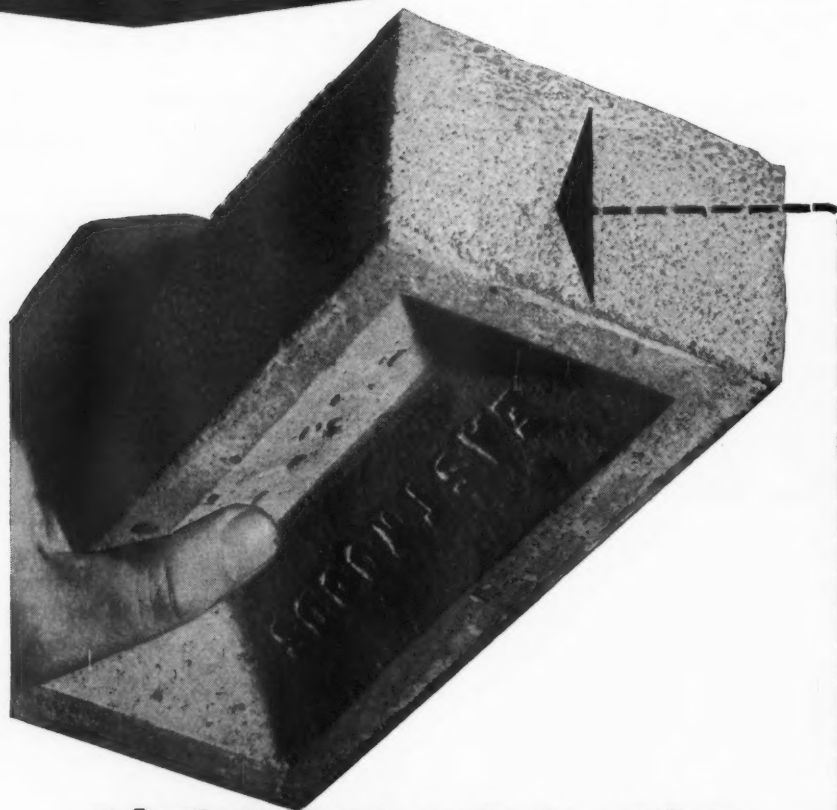
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Manufactured by the  National Coal Board

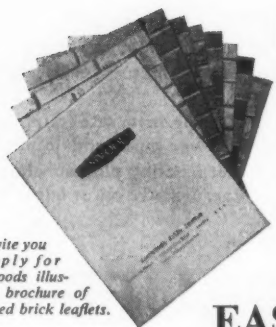
Synthaprufe is a product of British Coal. Further details, and advice on any technical problem, will gladly be given on application to the National Coal Board, By Products, National Provincial Bank Buildings, Docks, Cardiff.

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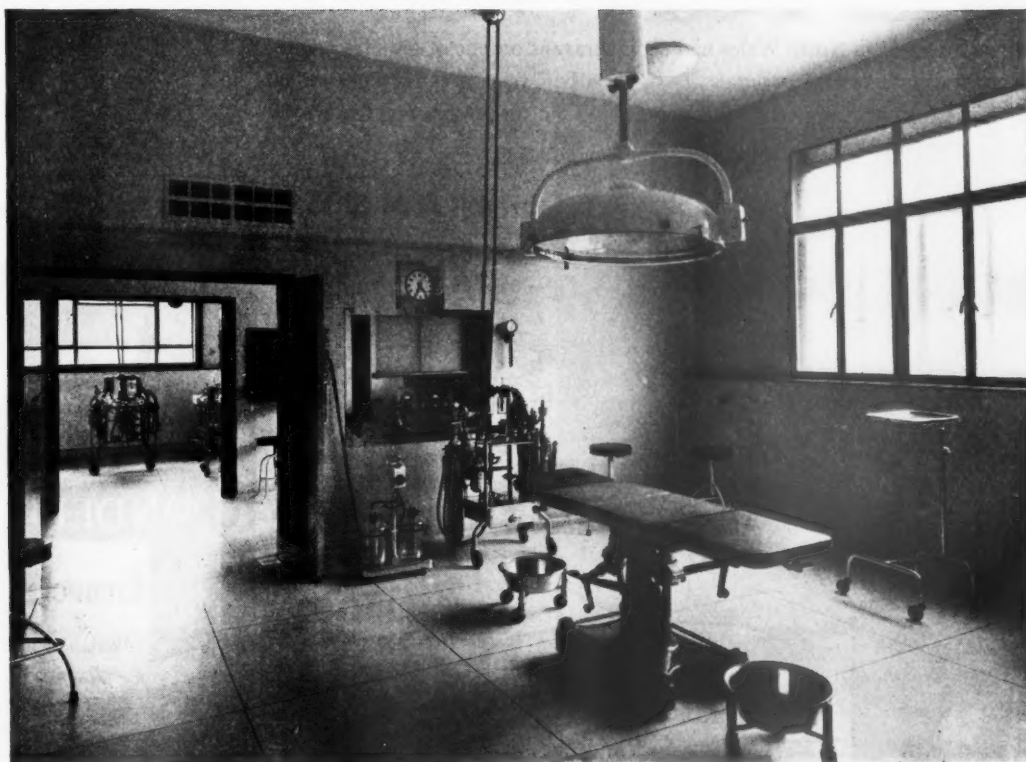
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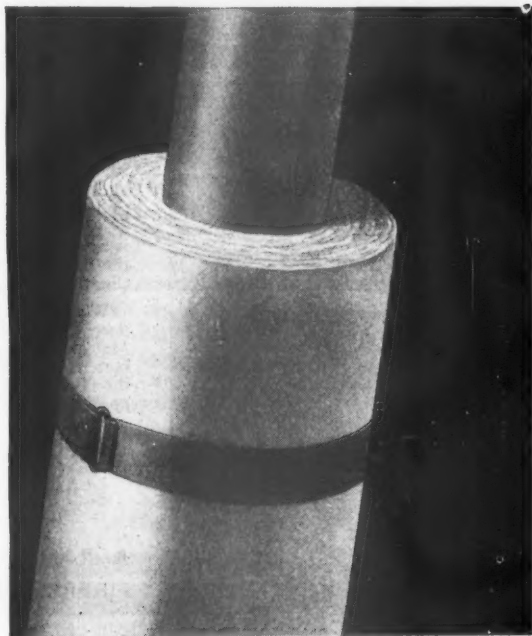
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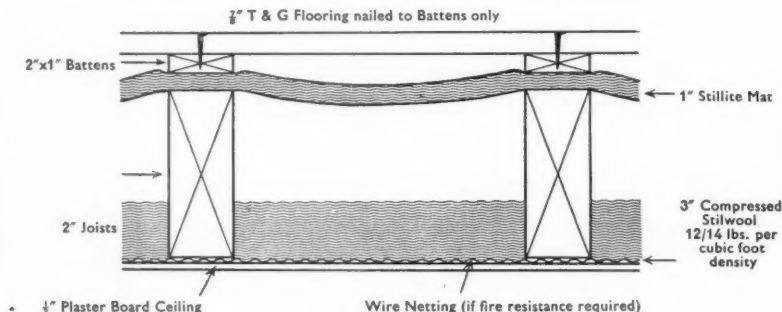
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The spaces between the joists are first filled from above with STILWOOL "plugging". STILWOOL mineral wool fibre is poured direct from the bag and spread evenly to a depth of approx. 5" this will provide the optimum weight for the insulation of airborne noise—approx. 3½ lbs. per sq. ft. (fig. 1).

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With the STILWOOL in position, drape a 1" layer of STILLITE mineral wool mat over joists to insulate the floor boards from the building structure. Strips of STILLITE should be closely butted and the outer strips should be turned up at the edges on all walls to a height of approx. 4". The STILLITE Mineral Wool Mat is not nailed as it is retained in position by the battens carrying the fully floating floor (fig. 2).

Wood battens 2" wide and at least 1" deep should be laid over the STILLITE Mat along the centre of each joist. These battens which form the only fixing for the floorboards are then temporarily nailed in position by partially driving home 3"

nails at intervals leaving heads approx. 1" proud. Joints in the battens must be staggered from one joist to another. Ends of battens should butt up against upturned flanges of the STILLITE mat, compressing it slightly (fig. 3).

The floorboards may now be nailed to the battens. It is most important that the fixing nails should enter the battens only and not penetrate into the joists. This would offset the "floating" nature of the floor and carry noise through the insulating mat. The temporary nails in the battens must be removed as work progresses. The upturned edges of the STILLITE mineral wool insulating mat are covered by the skirting boards (fig. 4).

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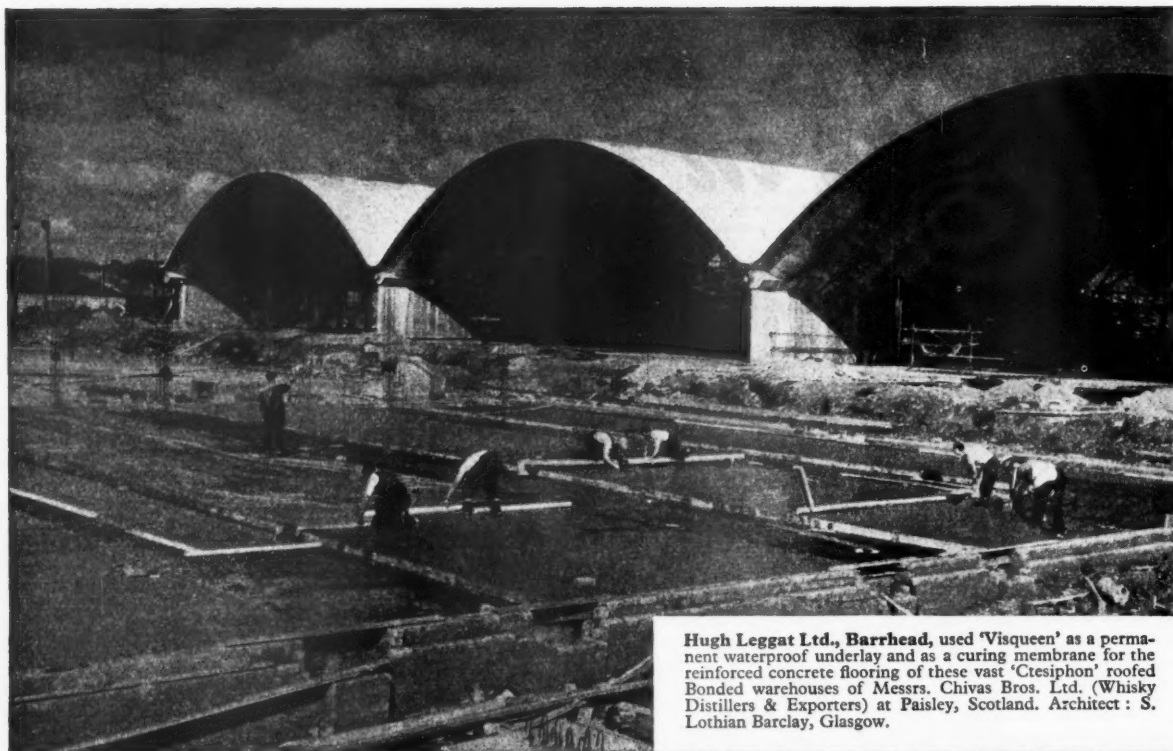
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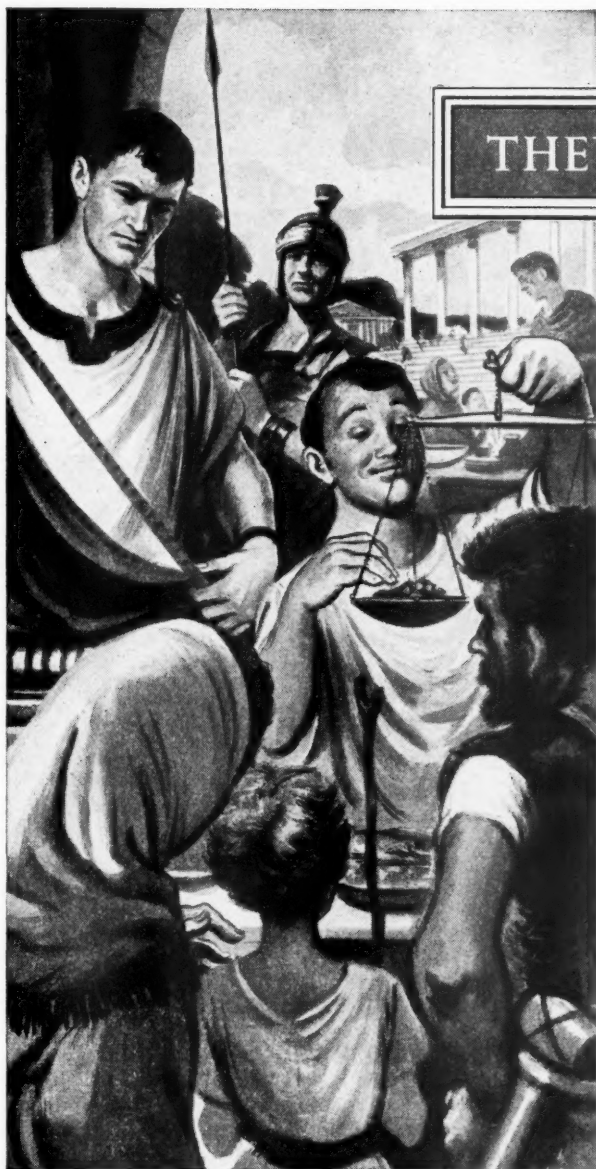


John Maclean & Sons Ltd. of Wolverhampton, use 'Visqueen' sheeting as a damp-proof membrane under the ground floor rafts of their "Beverley" houses in the Midlands. Architects: Diamond Hodgkinson & Partners.

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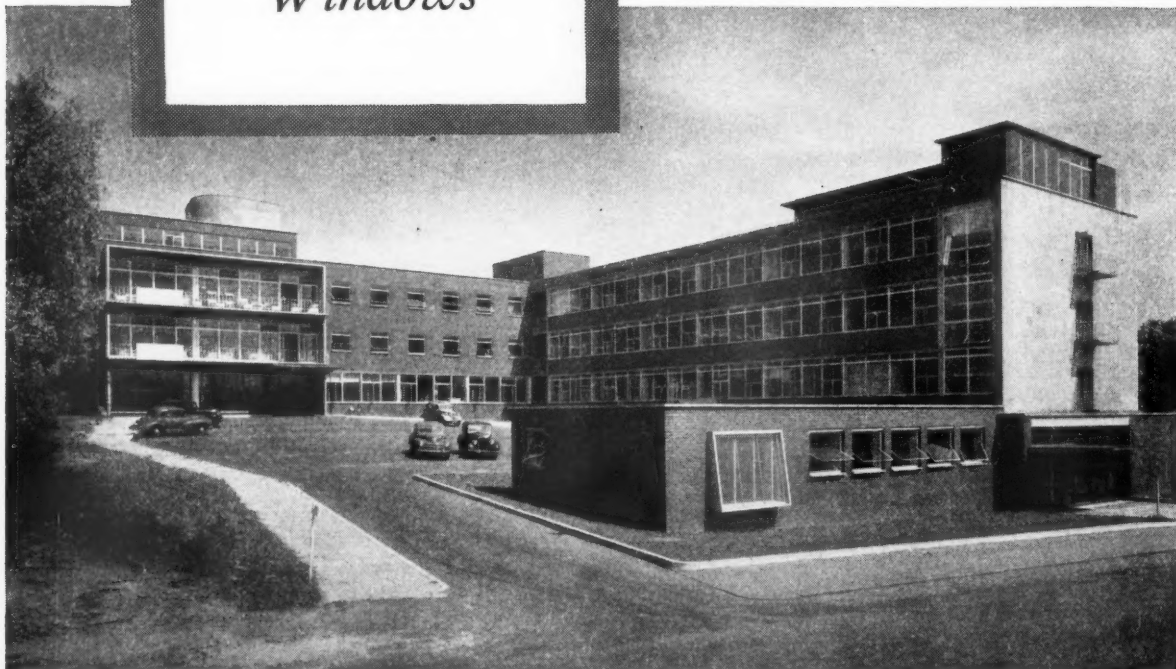
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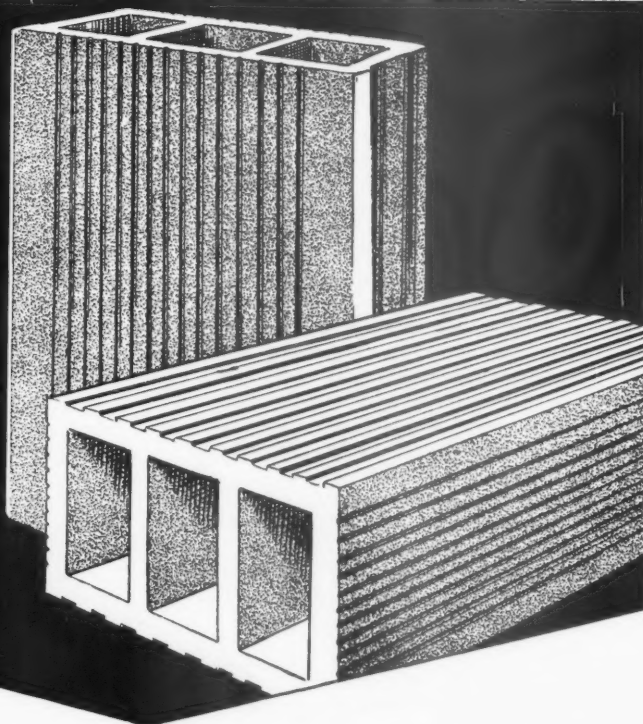
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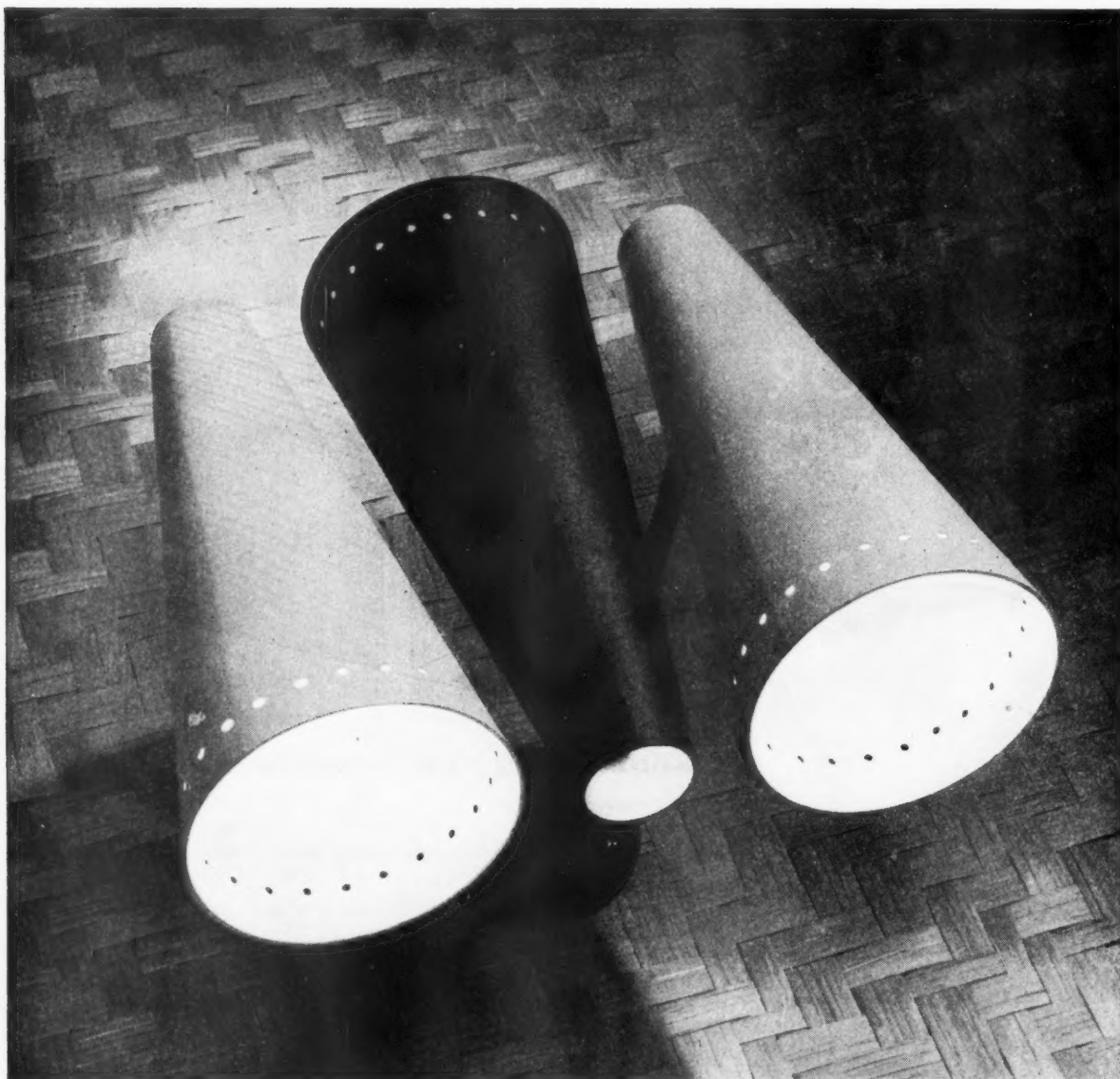
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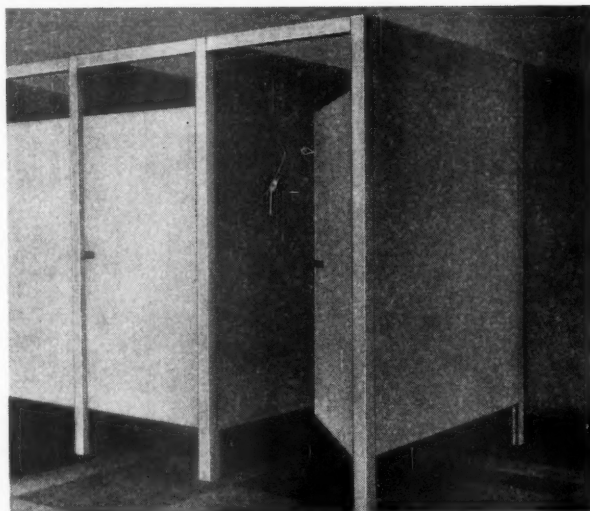
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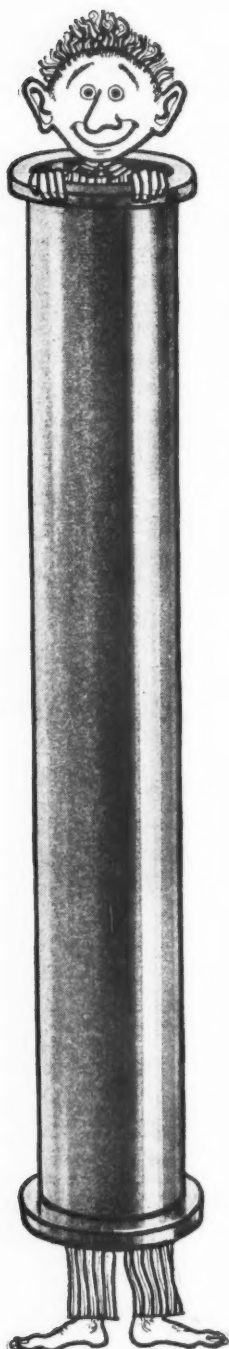
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Resin-bonded fibreglass sheeting has special characteristics which render it of great interest to the architect and of great value to his client. It admits light without glare and is shatterproof, both of which properties render it the roofing material par excellence. It is manufactured in corrugations to nest with all standard opaque corrugated roofing sheets. Tinted fibreglass sheeting, both flat and corrugated, solves many problems where structural strength is required without sacrifice of decorative appearance; and many charming effects may be created by arranging for natural or artificial light behind it.

The manufacture of any material in the form of a "sandwich" presents its own peculiar difficulties and it must be attributed to this fact that no rigid standard specification of universal application has yet been evolved for resin-bonded translucent fibreglass sheeting. The architect will therefore naturally largely be guided in his choice of sheeting by the reputation of the manufacturer. In this respect the Cascaloid Division of the British Xylonite Company Limited stands high: it has for many years been recognised as a leader in plastics manufacture and research and it guarantees the reliability of the translucent sheeting which it manufactures under the name CASCALITE.

The following brief notes on the properties and characteristics of Cascalite serve to indicate standards to which, it is suggested, all such material used for roofing should conform.

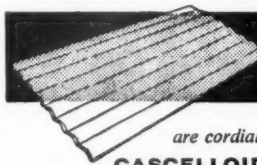
Cascalite structural sheeting has a load strength of 100 lb per square foot. Flexural strength averages 25,000 lb per square inch, tensile 12,500 lb per square inch (it should be noted that thickness of the sheet is not a reliable criterion of quality).

After 1,000 hours in a standard accelerated weather testing machine—equal to five years' normal outdoor exposure—Cascalite sheets show little change and indeed they are unaffected by climate, whether tropical or arctic.

When considering fibreglass translucent roofing material it is important to discover whether the percentage of light transmission claimed for it is by comparison with glass or with air. The untinted Cascalite transmits 85 per cent of the light transmitted through plain glass and its heat loss coefficient is actually better than that of glass. (Light transmission may be seriously reduced by poor manufacturing techniques which may not reveal themselves until after weathering has taken place.)

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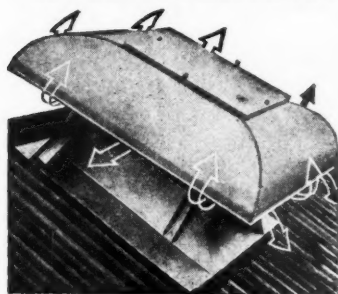
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Cascalite

are cordially invited to write or telephone to
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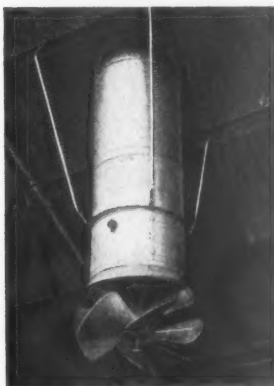
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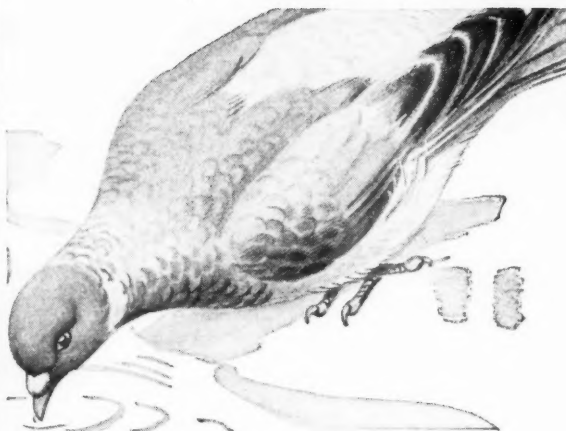
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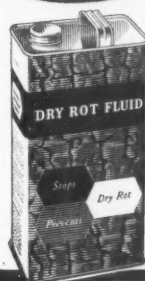
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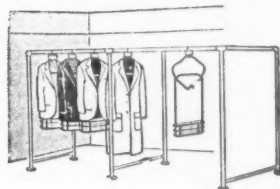
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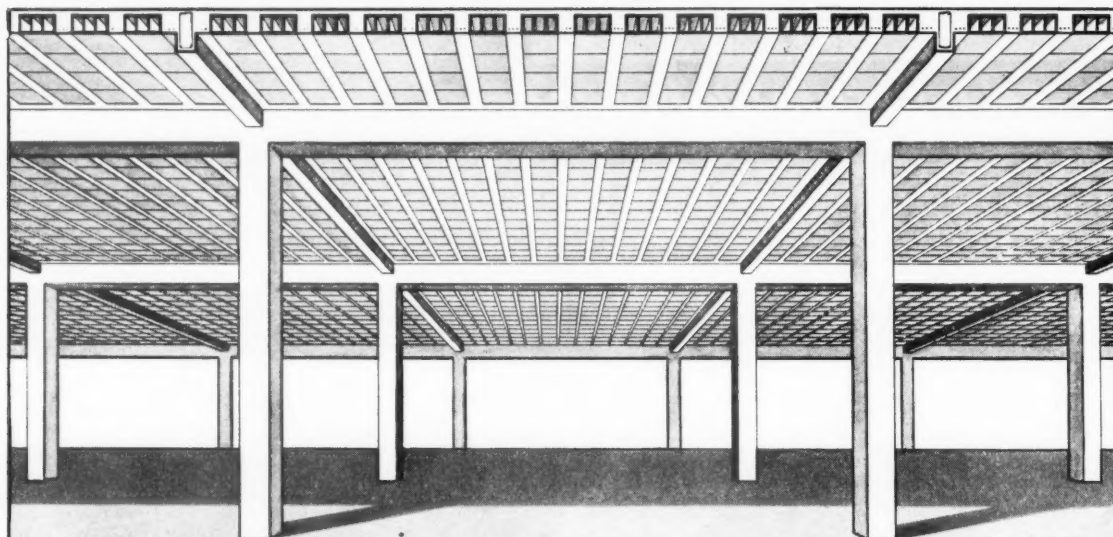
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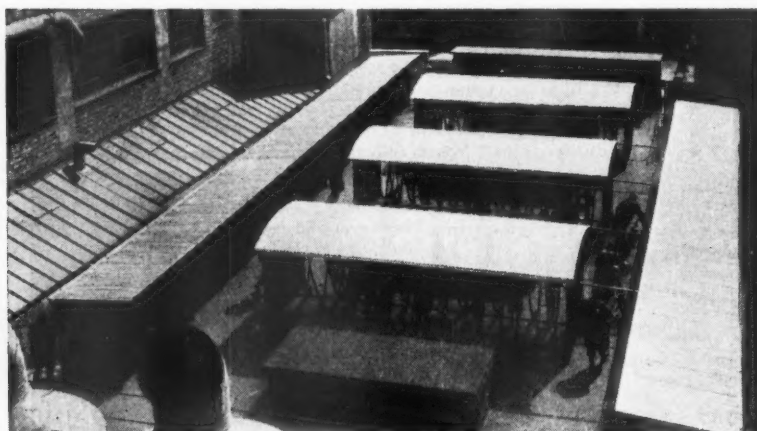
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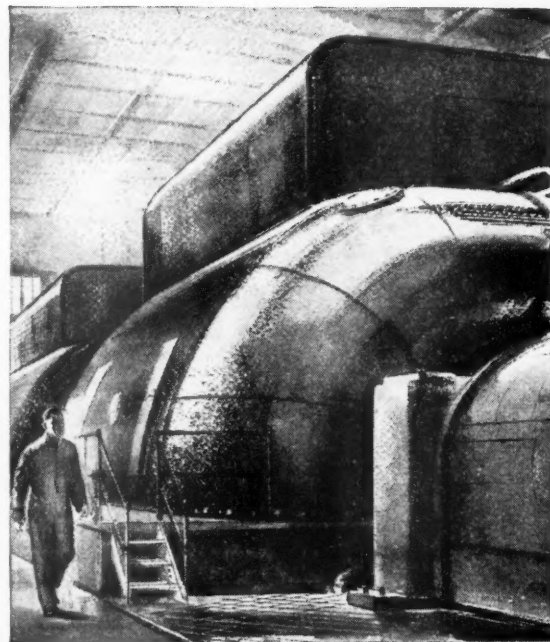
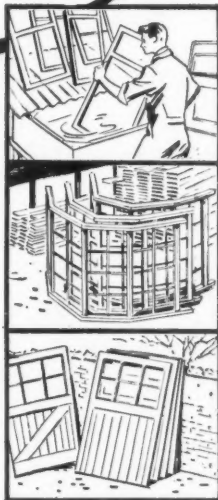
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Nuclear power will play an important part in meeting the ever-increasing demand for electricity. Work is now in progress on the first three nuclear power stations, at Bradwell, Berkeley and Hinkley Point. By 1966/7 some 5 to 6

million kilowatts of nuclear-generated electric power will be available.

Though these projects will not be completed for some time, the Central Electricity Generating Board plays an important part in today's fight against inflation. Power stations are being built at a cost no greater than in 1948 — £50 per kilowatt installed. And, although the output of the industry has doubled since 1948, the increase in manpower is only about one-third.

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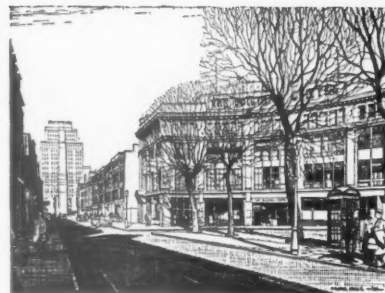
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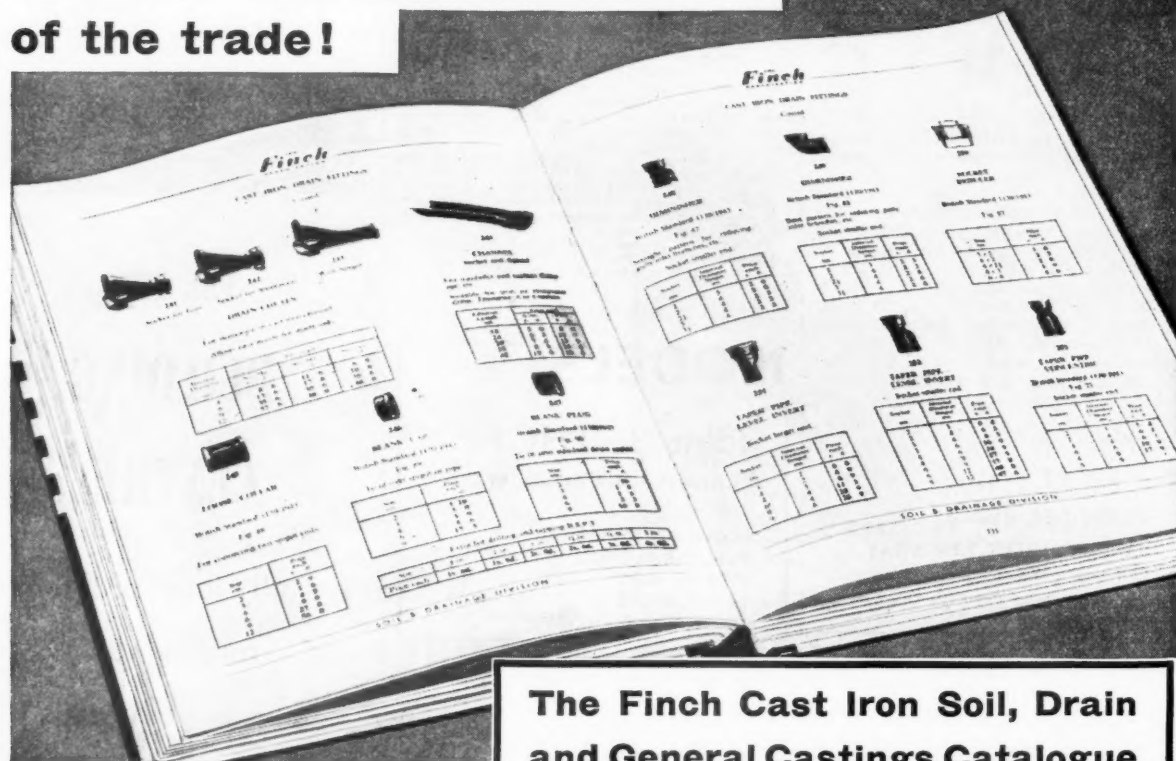
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ESIA

March 1959

Questions and Answers:

Pitch-fibre pipes for house drainage

Central heating—fuel costs

Timber roof trusses—costs

Cross-wall construction—costs

Sulphate attack in brickwork

Thermostatic control

PITCH-FIBRE PIPES FOR HOUSE DRAINAGE

Are pitch-fibre pipes as sound and lasting a job as the makers believe? Many local authorities do not allow them where they are to take the drainage. Is the builder possibly making for future trouble by incorporating them in the house drainage system?

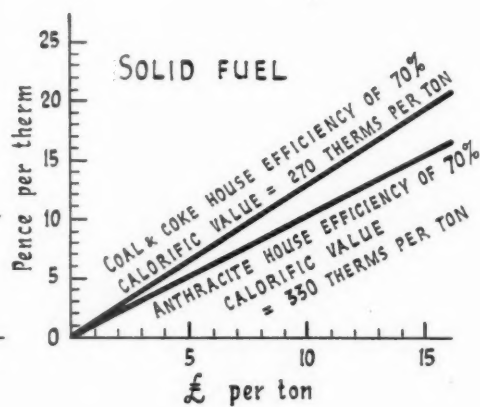
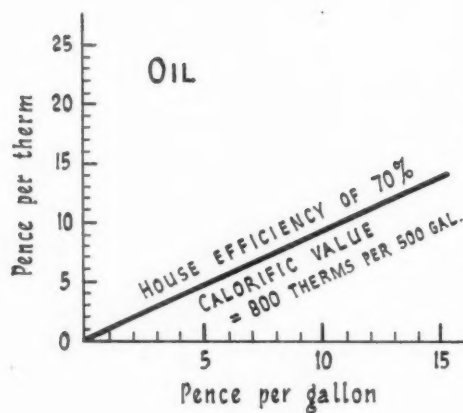
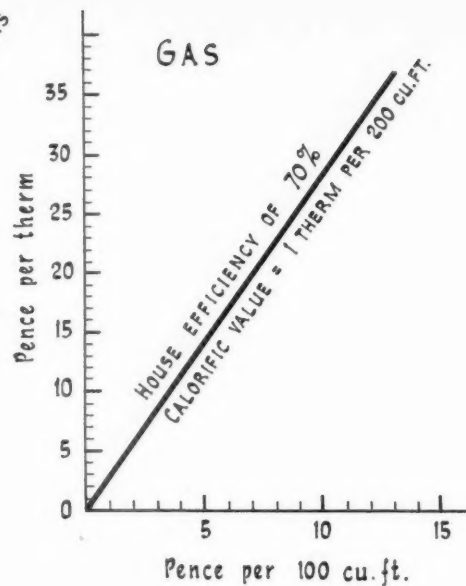
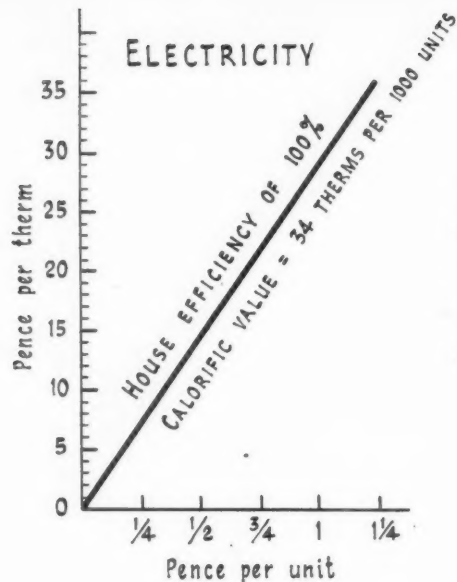
Although pitch-fibre drain and sewer pipes have not long been available on the British market, there has been long experience of their use in the United States, and every effort has been made to ensure that pipes of British manufacture are comparable in quality with those on which that experience is based. British manufacturers have had the advantage of consultation with their American counterparts to supplement their own experience in the manufacture and use of similar pipes. B.S. 2760 for pitch-impregnated drain and sewer pipes incorporates the same tests and the same requirements as those in the corresponding American standard, which is also accepted in Canada.

The plumbing codes of both these countries accept pitch-fibre pipes as satisfactory for their purpose, and independent evidence was obtained by an officer of the Building Research Station by inspecting examples of their use.

No kind of drain and sewer pipe gives perfect service in all circumstances. Carelessness and misconception in laying may lead to occasional

failures irrespective of the pipe material. There have been some reports in the United States of complaints of distortion in the run of pitch-fibre pipes in circumstances that would have caused fracture in a rigid pipe-line; other reports, of distortion of the pipe under the pressure of the back fill, point to the need for care in selecting and compacting the fill up to soffit level. The only failure that has so far come to notice in this country was found to have occurred in a single section of pipe at a point where this was bearing on narrow timber packing, left in by the construction gang. Under 8 ft of cover there was no perceptible deformation of adjoining sections. Defects of these kinds are indicative of deficiencies in pipe-laying and not in the pipes.

If pitch-fibre pipes meeting the requirements of the British Standard are laid in accordance with the recommendations set out in Appendix C of that Standard, a satisfactory performance can be expected in any normal circumstances. The pipes are intended to carry domestic drainage. There have been reports of successful use for carrying some trade effluents, but where any such use is being considered the makers should be consulted. As with all other pipes, special precautions would be necessary in mining areas.



COMPARATIVE COSTS OF FUEL.

CENTRAL HEATING—FUEL COSTS

How do the fuel costs of central heating systems using different fuels compare?

Probably the simplest and fairest method is to compare the costs per therm of heat delivered into the house. This can be done with the aid of the information given in Digest 94 and a knowledge of local fuel prices. Essentially, the method is to divide the price by effective heat output in therms, both per unit quantity of fuel. For central heating systems other than electrical, the effective heat output is usually taken as 70% of the calorific value of the fuel, unless exact details are available; for electrical systems 100% is generally assumed. These percentages are usually called "house efficiencies." Typical calorific values of the various fuels are given in the Table.

As an example, let us assume a coke-fired central heating system with a house efficiency of 70% and according to the Table a calorific value of 270 therms per ton. If we assume that the local price of coke is £10 per ton then the approximate cost per therm of heat delivered is

$$\begin{aligned} \frac{\text{price per ton in shillings}}{70\% \text{ of } 270 \text{ therms per ton}} &= \frac{200}{189} \\ &= 1s. 0\frac{1}{2}d. \text{ per therm approx.} \end{aligned}$$

TIMBER ROOF TRUSSES—COSTS

Is the timber truss a money saver for two-storey housing? How much, roughly (per 100 ft super)?

The difference in cost between a house with a trussed roof and a similar house with a traditional strutted purlin roof depends mainly on the plan and construction of the rest of the house. The additional timber required for a trussed roof is almost certain to make it more expensive than traditional construction. However economies may be possible elsewhere in the house which will make the complete house cheaper with a trussed roof than with a traditional one; alternatively the additional cost may be justified as the position of internal walls are not limited by the need to carry the roof load. Even if there is a wall where it would support a traditional roof, sufficient money to cover the extra cost of a trussed roof may be saved by being able to construct this wall in non load-bearing construction on the first floor.

Fuel	Typical calorific value or heat content
Anthracite	330 therms per ton
Coal (bituminous) ..	270 therms per ton
Coke	270 therms per ton
Light fuel oil ..	800 therms per 500 gal.
Gas	1 therm per 200 cu. ft
Electricity	34 therms per 1000 units

NOTE: 1 therm = 100 000 B.t.u.

The graphs on p. 2 give approximately the price per therm of heat delivered for the various fuels over a range of basic prices. With the exception of electricity, a house efficiency of 70% has been assumed throughout. Similar graphs can be prepared for systems with differing house efficiencies on the lines already indicated and further adjustments can be made for variations in the calorific value of the fuel if this is known.

For suggestions for the appropriate house efficiencies for other systems see Table 2 of Digest No. 94, and for comparative *capital costs* of heating systems in houses see Digest No. 93.

A house with a plan of this type was used in a recent experiment comparing alternative construction methods. These included a traditional roof, a trussed rafter roof and a trussed purlin roof. The house was semi-detached, 906 sq. ft in area with a transverse wall running from front to back on both ground and first floors. The average cost per house of materials and labour for the roof timbers, fascia and soffit were found to be:—

Traditional roof	£43
Trussed rafter roof	£53
Trussed purlin roof	£49

However, the trussed purlin roof did not include ceiling joists, as a prefabricated ceiling was used; if this ceiling is included the trussed purlin roof becomes the most expensive of the three types. The replacement of the load-bearing brick transverse wall on the first floor

by a clinker block partition would save about £5, which could be deducted from the additional cost of the trussed roofs. A traditional house of this particular design would thus be about £5 dearer with the trussed rafter roof than with the traditional roof.

This instance demonstrates that trussed roofs

are not automatic money savers. In some situations, however, they may enable money to be saved on other parts of the construction or allow a more suitable plan to be used. The decision whether it is economic to use a trussed roof can therefore be made only after considering all circumstances in a particular case.

CROSS-WALL CONSTRUCTION—COSTS

What can be saved (per 1000 ft super) roughly by the use of cross-wall construction in 2-storey houses?

Cross-wall construction is not inherently more economical than more traditional forms of construction.

In cross-wall construction, all the vertical loads of the roof and first floor are transmitted to the ground by transverse flank, party and possibly spine walls, as distinct from the more usual method by which all the walls enclosing the dwelling and some internal walls share the loads. Whether it is cheaper, or even possible, to adopt one method in preference to the other, depends on many design features such as plan, roof and wall types and finishes, and on site conditions.

The following are some of the factors to be considered before adopting cross-wall construction.

First Floor

The distance between the cross-walls is the main factor in determining the cost of the floor structure. Consideration must be given to the problem of supporting timber joists at the party walls, e.g. on hangers, as it may be impossible or undesirable to house them within the thickness of the wall.

Roof

The part of the load of a traditional pitched roof which is normally taken on the front and rear walls must be transferred to the transverse walls by beams. The cost of these extra items might be offset by the possibility of reducing the span of the roof by setting the beams back from the external walls.

A flat or low-pitched roof with lightweight covering, if acceptable, might be spanned in a similar way to the first floor.

A series of pitched roofs springing from the party walls would enable the latter to be reduced in height and the length of gutters to be reduced, but it would increase the area of external walling and increase the number of rainwater pipes and drain connections. The result might be an increase or decrease in cost depending on materials, pitch of roof, etc.

External walls, front and rear

As these walls have to carry no load it may be possible, but difficult, to find an acceptable substitute for traditional construction which is cheaper.

Foundations

Savings might be made if the foundations and under-building to the front and rear walls could be eliminated and a light cladding carried on the floor slab. But this would in part depend on the soil conditions.

Stability

In order to stabilize all walls it may be necessary to return the ends of the walls or introduce buttressing walls within the plan. For the same reason special means may have to be devised, such as the use of anchors or ties, to ensure some degree of rigidity between the walls and the roof and floors.

Site operations

The effect on site operations of all departures from traditional practice must be considered. If continuity of operations is broken, entailing more "stopping and starting" with reduced quantities of work in any operation, then labour costs will be increased. The effect can be assessed by careful consideration being given to programming of the operations at the design stage.

A greater degree of site supervision is usually

necessary for any method which departs from traditional practice.

A careful consideration of the alternative plan and structural solutions, bearing in mind

factors like the foregoing, can help to determine whether there is any economic advantage to be gained by the use of cross-wall construction in any particular circumstances.

SULPHATE ATTACK IN BRICKWORK

A building with external walls of rendered brickwork was completed about three years ago. Horizontal cracks have now developed in the rendering, in the parapet walls and in free-standing boundary walls with a brick coping. Common clay bricks were used throughout in a 1 : 2 : 9 cement/lime/sand mortar. The rendering, which was applied to all external walls, also to both sides of the parapet, and free-standing walls, was two-coat work in 1 : 3 cement/sand mix.

It is known that the common bricks used contain sulphates and it appears possible that sulphate attack is responsible for the cracking that has occurred. What steps should be taken to halt the deterioration and how can this trouble be avoided in future buildings?

The cracking described is typical of that produced by sulphate attack in brickwork. It occurs when soluble sulphates in the bricks attack certain constituents of Portland cement or hydraulic lime, causing expansion of the mortar joints. For this reason the cracks are in the main along the lines of the bed joints, and the rendering has had to crack along these joints to accommodate the expansion. In places the back of the rendering itself shows signs of sulphate attack and thereby its adhesion to the brickwork has been lost.

Sulphate action can occur only in wet conditions. The primary cause of the wet conditions here is the absence of adequate protection to the top of the parapet and boundary walls. This and perhaps initial shrinkage cracking of the rendering will have allowed penetration of moisture into the brickwork. Owing to the impervious nature of the

rendering, this moisture could not readily dry out. The brickwork therefore became saturated, providing ideal conditions for sulphate attack to occur. A coping would reduce the amount of penetration of moisture, but unless the joints are very carefully made with mastic it would not be wise to rely on a coping alone.

The design should have included damp-proof courses under the coping and at the junction of the wall with the roof. The principles of these details are shown in Digest No. 11 and working details in British Standard Code of Practice CP. 121.101 (1957)—Brickwork.

There is no remedial measure that can be guaranteed to stop deterioration of the parapet and boundary walls. The most that can be hoped for is to reduce its rate. Preferably the parapet wall should be rebuilt using a brick of low sulphate content, providing damp-proof courses and an adequate coping. If this is not possible and deterioration has not yet made the walls dangerous, the coping should be removed, a damp-proof course inserted below it and the coping then replaced with a mastic pointing to the joints. The whole of the defective rendering on the parapets should be replaced with a more porous mix, say 1 : 1 : 6 cement/lime/sand. Similar steps should be taken with boundary walls. Where conditions are favourable to sulphate attack, i.e. where the available bricks have an appreciable sulphate content and the average rainfall is high, or the conditions of exposure are severe, additional protection can be obtained by using sulphate-resisting Portland cement for mortar and rendering mixes.

THERMOSTATIC CONTROL FOR CENTRAL HEATING

Does an external thermostat for automatically controlled central heating systems in dwellings really save a worthwhile amount of fuel?

If an external thermostat is to be worthwhile

its use must be considered in relation to the scope and general controllability of the installation. For extensive installations serving a large building such as an office block, school, or

factory, there is much to be said on grounds of fuel economy for including external controls which can react to differences in the local climate round the building. In dwellings, however, the heating requirements are affected not only by the vagaries of the weather but also by individual preferences of the occupants which may vary from hour to hour and day to day. Even if an external thermostat is fitted, it is

important for domestic installations to be so designed that the occupants make most efficient use of the equipment, by intelligent adjustment of the controls. Even where the simplest type of internal controls are fitted, much can be done by sensible operation to meet changes in heat demand. Except therefore in special circumstances an external thermostat is not considered necessary for houses.

BUILDING RESEARCH STATION FILM LIST, JANUARY 1959

The following 16-mm films are available for loan in the United Kingdom, free of charge, on application to the Film Officer, Ministry of Works, Abell House, John Islip Street, London, S.W.1, or to the Ministry of Works in Edinburgh or Cardiff of the appropriate regional office. At least a fortnight's notice is desirable.

Copies of the films may also be purchased on application to the Director, Building Research Station, Garston, Herts.

- A 1 External rendered finishes (silent, 31 min)
- A 2 The spray method of cleaning limestone buildings (silent, 14 min)
- A 3 How tree roots can damage buildings (11 min)
- A 4 Experiments in blocklaying (15 min)
- A 5 Foamed-slag concrete (33 min)
- A 6 Building on shrinkable clays (8 min)
- A 7 Aerated concrete (21 min)
- A 8 Parapet walls (colour, 9 min)
- A 9 Handling concrete on housing sites (31 min)
- A 10 House-building with a tower crane (23 min)
- A 11 Sands for concrete (9 min)
- A 12 Kitchen planning (18 min)
- A 13 Single-stack drainage (15 min)
- A 14 Keeping houses warm (28 min)
- A 15 House foundations on shrinkable clays—methods and costs (colour 22 min)
- A 16 Handling bricks in packages (colour, 14 min)

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